KONICA MINOLTA

TROUBLESHOOTING GUIDE

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KONICA MINOLTA BUSINESS TECHNOLOGIES, INC.
CS Operations

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1 Low density (under low humidity environment)

[Symptom]
The density is low at solid and highlighted part.

[Probable cause]
Increase of toner charge in developer under low humidity environment.
Decrease of developing ability due to the toner charge increase in developer due to the too high or too low coverage original.

[Solution]
<Solid part>
Access Service mode=> [02 Process Adjustment] => [04 Process Fine Adjustment] => [02 Develop AC Bias Fine Adj.], then increase the adjustment value for the color which you want to increase the density.

NOTE:
When the density is increased by the [02 Develop AC Bias Fine Adjustment], carrier attachment occurrence frequency increases. Therefore, please check no white spot which is resulted from carrier attachment appears on the solid part.

If [02 Develop AC Bias Fine Adj.] cannot solve the problem, also use [03 Develop AC Frequency].

NOTE:
When the setting value (frequency) is decreased density increases but the image background tends to occur. Therefore, please adjust carefully.

After the above adjustment, perform Automatic gamma adjustment from service mode or utility menu

- ► Service mode => [02 Process adjustment] => [02 Drum peculiarity adjustment] => [03 Auto Gamma adjustment]
- ► Utility menu => [03 Machine Admin. Setting] => [01 System setting] => [05 Expert adjustment] => [08 Execute adjust operation] => [Automatic gamma adj.]

<Highlighted part>
After adjusting the solid part, if the highlight is lighter, perform printer gamma offset adjustment or Printer gamma offset automatic adjustment.

- ► Service mode => [01 Machine Adjustment] => [03 Quality Adjustment] => [02 Printer gamma adjustment] => [01 Printer Gamma Offset adj.] or [02 Printer Gamma Offset Auto adj.]
- ► Utility menu => [03 Machine admin. Setting] => [01 System setting] => [05 Expert adjustment] => [07 Quality adjustment] => [01 Printer gamma offset adj.] or [02 Printer gamma offset auto adj.]

NOTE: Perform Automatic gamma adjustment immediately before performing this adjustment.

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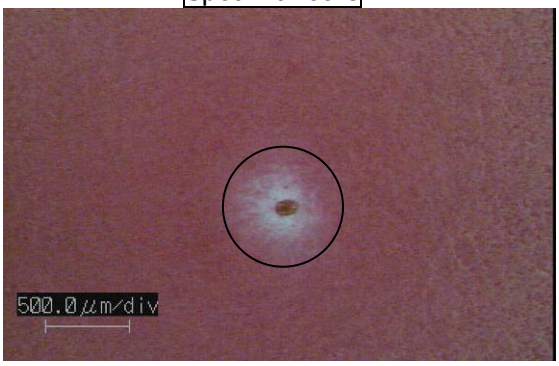
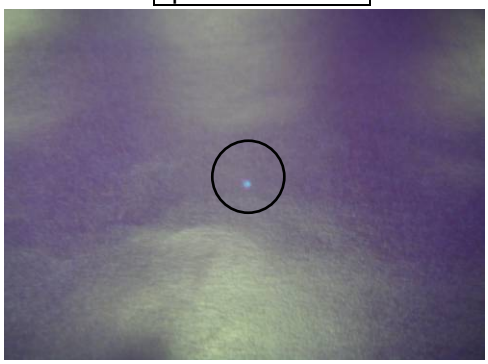
2 White spot

[Symptom]
White spot appears on the image.

Spot with core



Spot without core



A: When symptom occurs only for single color, see probable cause A.
B: If the symptom is solved when changing the paper type to the recommended paper, see probable cause B.

[Probable causes and solutions]
A: If the spot has core, white spot appears due to the increase of the inside machine temperature according to the high room temperature or other factor. By the temperature increase, toner forms core in the developer and the poor transfer (1st transfer/2nd transfer) occurs around the core, causing the white spots.
If the spot does not have core, the cause is the high charge developer by the many prints of the low coverage original etc. When the charge amount of the developer increases, the transfer ability decreases at the part, causing white spots.
To correct the above, perform toner refresh mode:
Utility menu => [03 Machine Admin. Setting] => [01 System Setting] => [05 Expert Adjustment] => [08 Execute Adjust Operation] => [Toner refresh mode]
If it does not improve, after checking the following setting, perform the toner refresh mode again.

Service mode => [02 Process adjustment] => [05 Interval/Quantity adjustment] => [03 Auto refresh interval] => [Refresh quantity] => Select from [small], [middle], [large]

Refresh amount	Toner consumption per one refresh operation	Max number for refresh mode execution
Small	A3 solid, 3 sheets equivalent	3 times
Middle	A3 solid, 5 sheets equivalent	Twice
Large	A3 solid, 8 sheets equivalent (8050 equivalent)	Once

If toner refresh is performed excessively, not only too much toner is consumed but may cause cleaning failure of the transfer belt (passing through, packing). Therefore, keep the above max number when performing the refresh mode.

B: If the used paper and the set current for the 1st transfer and the 2nd transfer do not match, transfer ability becomes poor and tends to generates white spots. To correct the above, perform 1st transfer manual adjustment and 2nd transfer manual adjustment. For the adjustment procedure, see 13 Problem with non-recommended paper.

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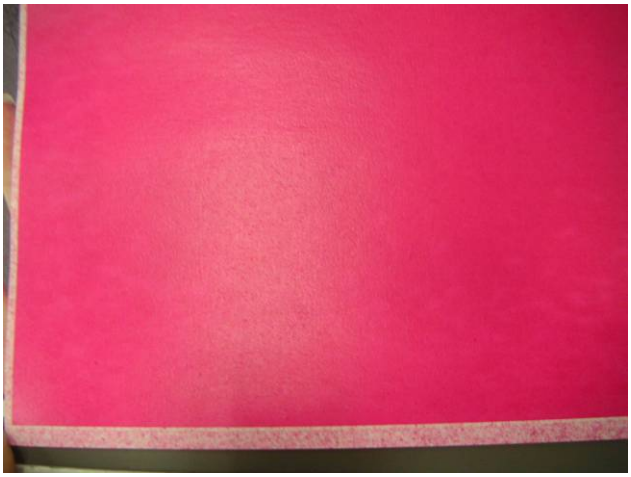
3 Carrier attachment to the image

[Symptom]
Carrier attaches to the paper and image turns to the leopard-print-pattern with the rough texture.



[Probable cause]
Environment changes and conditions to cause carrier attachment are satisfied.

[Solution]
To reduce the carrier attachment, adjust the following.

1) Service mode => [02 Process adjustment] => [04 Process fine adjustment] => [01 Covered margin fine adjustment] (Decrease the set value)
   Side effect: Background
2) Service mode => [02 Process adjustment] => [04 Process fine adjustment] => [04 Toner density fine adj (Increase the set value)]
   Side effect: Background

After the above setting changes, ensure to perform automatic gamma adjustment from service mode or utility menu.

- ► Service mode => [02 Process adjustment] => [02 Drum peculiarity adjustment] => [03 Auto Gamma adjustment]
- ► Utility menu => [03 Machine Admin. Setting] => [01 System setting] => [05 Expert adjustment] => [08 Execute adjust operation] => [Automatic gamma adj.]

NOTE: When the settings are changed, the developing ability may decrease and the image density may decrease.

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4 Poor transfer

[Symptom]
Regardless of the color, white spots appear entire image area or in the band area.

A: If the symptom occurs in single color, see probable cause A.
B: If the symptom occurs in all colors, see probable cause B.
C: If the symptom disappears after changing the paper, see Probable cause C.
D: If the carrier attaches, see [3. Carrier attachment to the image].

[Probable causes and solutions]
A: First transfer condition is inappropriate.
If the first transfer current is high, the opposite charge is applied to the toner at the transfer. Accordingly, toner returns to the drum and poor transfer occurs. If the transfer current is low, the electric field necessary to perform the normal toner transfer is not obtained and poor transfer occurs.
To correct the above, adjust the settings suitable for the paper:
For the transfer current, optimum values exist for the 1st transfer and 2nd transfer.
1) For the proper adjustment, the 2nd transfer current should be adjusted first then the 1st transfer current.
2) Adjust the first transfer current from following: [Utility/Counter] => [03 Machine Admin. Setting] => [01 System Setting] => [05 Expert Adjustment] => [06 Process Adjustment] => [01 Front & Back Density]. However, when too high or too low value is entered, the adjustment fails.

B: Change Dipswitch 1-0 (To display process adjustment to user screen) from 0 (Default) to 1. Then, [Process adjustment] key is accessible from COPY (or MACHINE) screen. (COPY (MACHINE) => [Paper Setting] => [Change] => [Process Adj.] => [2nd transfer Offset (Front) and/or (Back)]) Set appropriate 2nd transfer current for each tray referring paper being used. However, when too high or too low value is entered, the adjustment fails.

C: The set transfer current does not match to the characteristic of the used paper.
Depending on the resistance dispersion of the paper, smoothness and moistness etc, the proper transfer current setting is different.
Perform adjustment described in the B. If the optimum condition cannot be set, propose customer to try another paper type.

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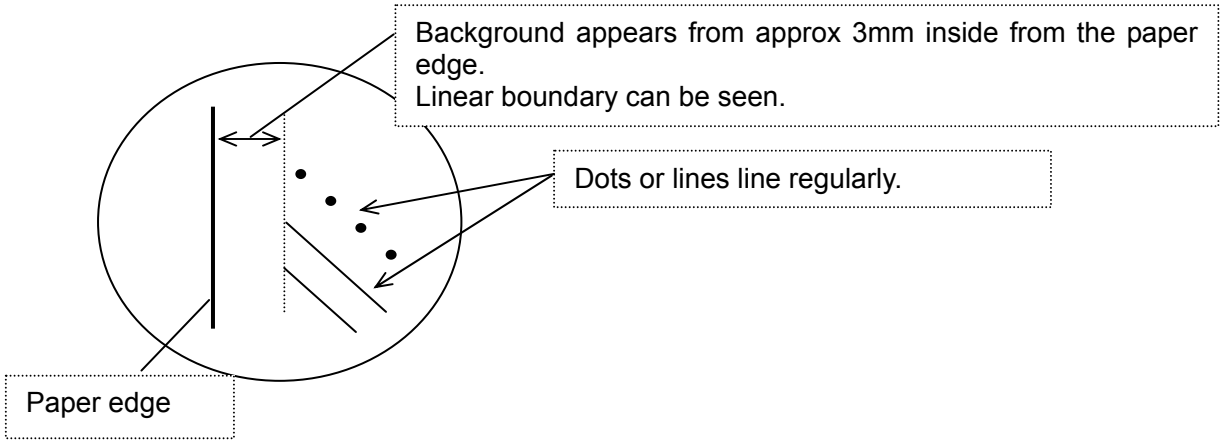
5 Background

[Symptom]
Toner attached to the overall white area and background is slightly colored.

A: If the background is created at the process section, see probable cause A.
B: If the background contains the data (like following figure), see probable cause B.


Background appears from approx 3mm inside from the paper edge.
Linear boundary can be seen.
Dots or lines line regularly.
Paper edge

Enlargement of area for judgment

[Probable causes and solutions]

A: The environment condition changed.
Perform one or more of following adjustments:

- ► Service mode => [02 Process adjustment] => [04 Process fine adjustment] => [01 Covered margin fine adj]: Increase the set value to depress the background. After setting, perform auto gamma adjustment.
- ► Service mode => [02 Process adjustment] => [04 Process fine adjustment] => [03 Develop AC frequency]: Increase the set value to depress the background. After setting, perform auto gamma adjustment.
- ► Service mode => [02 Process adjustment] => [04 Process fine adjustment] => [04 Toner density fine adjustment]: Decrease the set value to improve the background.

B: The cause is in the output data.
For the correction, check and correct (remove the dots and the lines from) the image data.

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6 Repeater Mark

[Symptom]
On the output image, cyclic soilage or white area appears.

[Cause]
Failed mechanical part.
・Approx 188mm pitch: Damage on the drum surface.
・Approx 251mm pitch: Damage on the fusing belt
・Approx 53mm pitch: Developer conveyance failure of developing sleeve.
・Approx 95mm pitch: Soiled second transfer roller

[Solution]
Clean or replace the failed part or unit.

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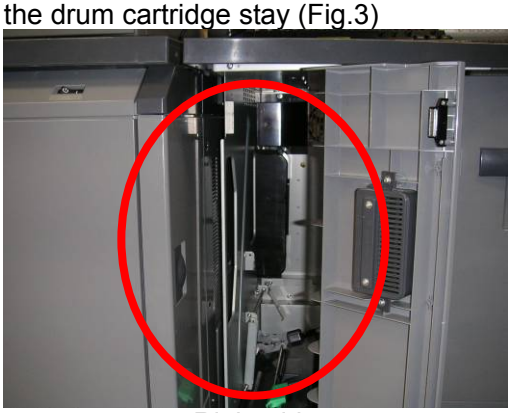
7 Toner spilling

[Symptom]
Toner spills and attaches on the output irregularly.

[Probable cause]
Due to the toner scattering or background (see 5 Background), the inside of the machine is soiled then toner falls on the paper path from the separation claws etc, causing the soil.

[Solution]
1) Check the status of dust proof filter/1 assembly (A03UR70100) at the right side of main body. If too much toner scattering is confirmed, replace the filter, clean the developing unit upper cover (Fig.1) and process carriage (Fig 2) on which the developing unit is installed. Also, clean the drum cartridge stay (Fig.3)



Right side

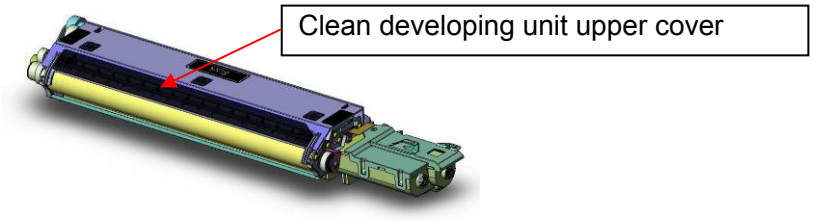


Fig. 1: Developing unit upper cover

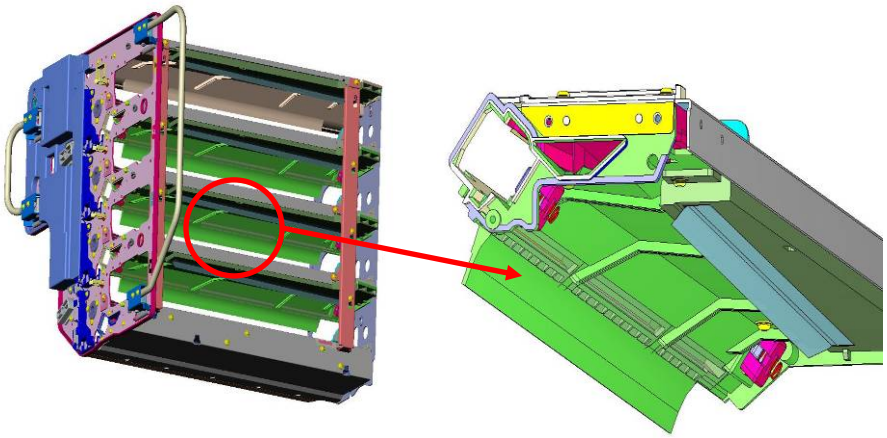


Fig 2: Where should be cleaned on Process carriage

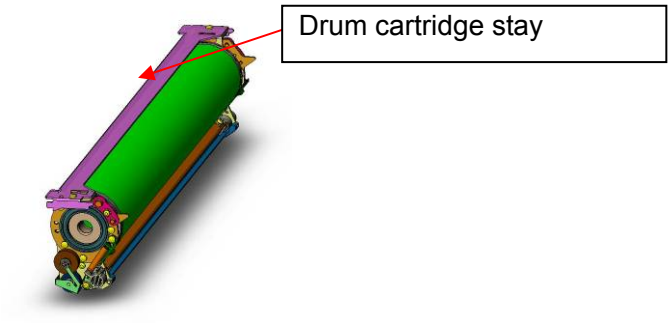


Fig 3: Drum cartridge stay

2) After taking out the process carriage, if inside of the machine is very dirty, replace the dust proof filter/2 assembly (65AAR71800) at the main body rear side.

Rear side

3) Clean around the paper conveyance section and separation claws etc. After cleaning, feed around 10 sheets of blank A3 paper to remove the dust in the paper path.

* CAUTION:
When toner spilling occurs, remove all charging coronas first then take out the process carriage. It is to prevent the charging corona from becoming soiled by the removal /installation of the process carriage.

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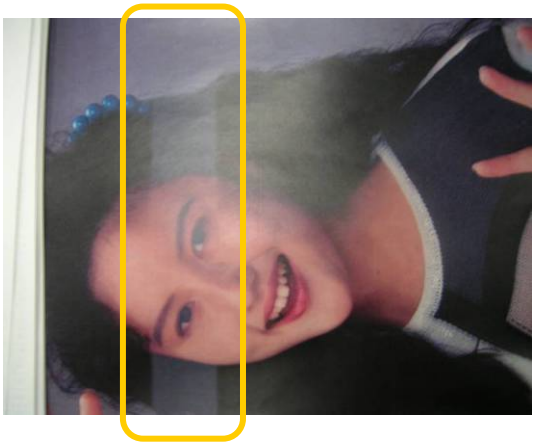
8 White lines (to sub-scan direction)

[Symptom] White lines to sub-scan direction (paper feeding direction)



Paper feeding direction

A: White band appears at the single color,
- A-a Charging corona problem
- A-b Developing unit problem
- A-c Scratched drum

B: Sharp white band appears at the single color, see probable cause B.
- B. Foreign material exists in the laser beam path

C: If the sharp white band appears at the single color, see probable cause B.
- C-a White line appears regardless of color (Scratch on the transfer belt)
- C-b White line appears regardless of color (intermediate transfer belt filming)

A-a: White line appears on single color (charging corona problem)

[Probable causes] Drum potential failure

1) Charging grid gets soiled with the toner etc. and the potential control becomes poor.
2) The drum surface potential increases at the position corresponding to the soiled part of the grid.
3) After exposure to the drum, the potential does not decrease and white band appears.

[Solution]

1) Clean the charging grid with the Hydrowipe (p/n 65AA-9920) which does not produce lint.
2) Clean the charging wire with the equipped cleaning material.

A-b: White line appears on single color (developing unit)

[Probable cause] Check the toner bristle of the respective color developing unit. If the bristle is not formed at the specific point, the foreign material is caught at the developer regulating blade.

[Solution]

Replace the developer and clean the developing unit.

A-c: White line appears on single color (scratched drum)

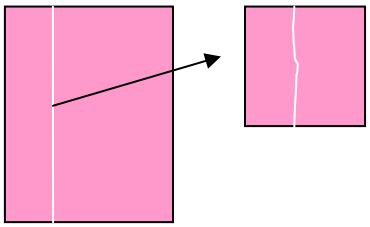
[Probable causes] The scratch is on the respective color drum.

[Solution]

Replace drum cartridge.

B: Sharp white band appears at the single color (foreign material on the laser path)
[Probable cause] Dust, toner and so son attaches to the light path for the image wiring and locks the laser beam, causing white band to appear.

[Solution]
Clean the soil and dust which block the light path with the Hydrowipe.
(Specifically, the lower part of the developing casing.)



If the white line is meandering like this, refer to 25. White (meandering line)

C-a: White line appears at the single color (intermediate transfer belt filming)
[Probable cause] Filming of intermediate transfer belt sometimes occurs and the belt resistance changes. As the result, poor transfer occurs and white band appears.

[Solution]
Adjustment => [03 Execute Adjustment] => Perform [Belt refresh mode]
Only one time as the maximum.
Toner consumption per one time adjustment is: C and M toner A3 solid 5 sheets equivalent

Filming tends to occur with the frequent print of low coverage or B5 or 5”1/2×8”1/2 or less size.

CAUTION:
Do not perform belt refresh or toner refresh more than specified maximum times.
Otherwise, toner cleaning failure and other problem may occurs.
During the BT developing process, belt refresh or toner refresh is rarely used and BT presumed refresh mode is basically not needed.

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9 Uneven gloss

[Symptom]
Oval shape uneven gloss appears at the image part.

[Probable cause]
Foreign material attaches to the fusing belt (dust, carrier).
It is presumed that the dust attaches while replacing the fusing belt. (Though it is not reproduced during the in-house test but it is the possible factor for the dust entrance.)

[Solution]
Replace fusing belt

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10 Paper waving

[Symptom]
The edge of the paper becomes wavy.

[Probable causes and solutions]

A: The paper shrinks ratio at the fusing unit is different between the center and edges of the paper. To correct it, change Dipswitch 1-0 (To display process adjustment to user screen) from 0(Default) to 1. Then, [Process adjustment] key is accessible from COPY (or MACHINE) screen. (COPY (MACHINE) => [Paper Setting] => [Change] => [Process adjustment])
At [Process adjustment] => [Compulsion OFFUpHeater >= 261mm)], reduce temperature. If this change does not resolve, decrease overall fusing temperature with the following procedure.
1) From COPY (MACHINE) screen => [Paper Setting] => [Change] => [Process adjustment], decrease temperature of fusing upper/lower rollers for each tray.
2) Access Service mode => [03 System setting] => [01 Software SW Setting], Change values for 19-1 to reduce temperature (Avoid this adjustment as much as possible.)

When combining 1) and 2), temperature can be decreased largely. Avoid using 2) as much as possible. The rough target of the temperature decrease is 10°C (max. 20°C) and temperature should be reduced gradually.
When changing temperature, print 20 sheets of output pattern 1 or 53 with single color solid (Y, M, C or K) and ensure no offset due to insufficient fusing occurs.

B: When very moisture paper is used the amount of moisture which vapors during fusing differ between center and edge of the paper and the symptom specifically noticeable.
To correct it, use the paper fresh from opening the package (containing less moisture).

C: Depending on paper type, the influence of the paper fiber is very big in some cases.
If the paper waving still occurs after decreasing fusing temperature and using paper fresh from opening the package, propose customer to try another paper type.

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11 How to maintain consistent color during continuous printing

[Symptom]
Inconsistent color

[Solution]
C6500 series have 3 correction items to adjust the color. Aim the stable color optimum for the target depending on the job size and machine usage by combining correction items and interval.

<Correction items>
Color correction performed between jobs

- Automatic gamma adjustment
  Adjustment cycle : 1000 prints
  Adjustment duration: 210 to 240 seconds
  CAUTION: Even the adjustment cycle 1000 prints comes, the adjustment is performed only after 1minute interval between jobs.

Color correction that is done during a job (It is performed only if stability is selected in Utility menu => [03 Machine Admin. Setting] => [01 System setting] => [05 Expert adjustment] => [07 Quality adjustment] => [04 Image quality stability]]

- Maximum density correction (D-Max)
  Duration: approx 3 seconds (Performing only during printing the job)
- Gamma correction
  Duration : approx. 27 seconds (Performing only during printing the job.)

* Correction performing interval is roughly the following prints.

Max density correction	Frequency				
	-2	-1	Normal	+1	+2
	200 prints	100 prints	50 prints	30 prints	10 prints
Gamma correction	Frequency				
	-2	-1	Normal	+1	+2
	N×15	N×10	N×8	N×5	N×3

N: Number of prints set for the max density correction.

CAUTION: For the gamma correction, if total prints of a job does not reach to the set interval, the counter for the correction is cleared. (With default setting). If counter clear is not desirable, change the DipSW 24-0 from 1 (clear at the beginning of the job) to 0 (no clear at the beginning of the job). However, please note that job output timing and correction timing sometimes overlaps and nothing is output for 30 seconds occasionally.

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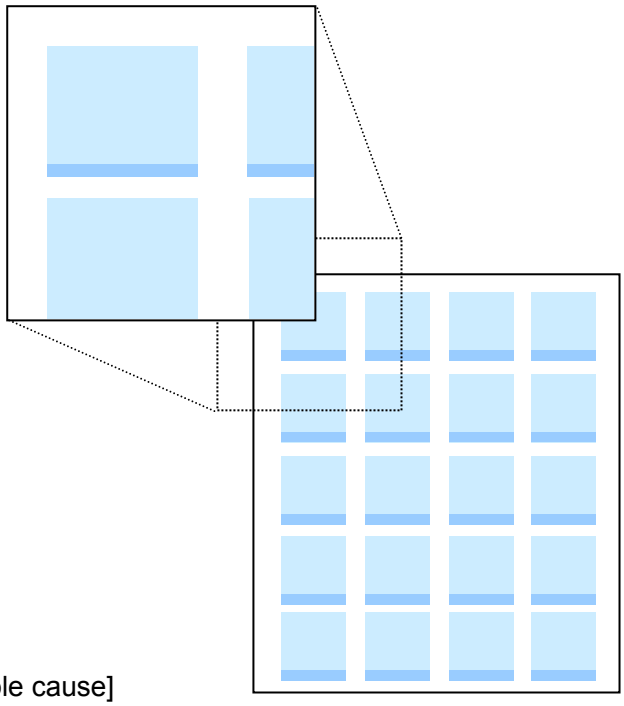
12 Darker at the trailing edge of image

[Symptom]
The image density increases at the trailing edge of the paper to the paper feeding direction



[Probable cause]
Developing sleeve rotation direction and drum ration direction is opposite.

[Solution]

► Solution 1:
Change the screen. If Line1 or Dot1 is used, change to Line2 or Dot2.
Still the image density difference is noticeable change the Custom screen setting:
Utility menu=>[03 Machine Admin. Setting] =>[01 System Setting] =>[05 Expert Adjustment]=> [07 Quality Adjustment] => [05 Custom screen]. Change [Line2]:[Type1] to [Type2], [Dot2]:[Type1] to [Type2].

► Solution 2:
If customer does not want to change screen, change the Developing AC frequency from Service mode.
Service mode => [02 Process Adjustment] => [04 Process Fine Adjustment] => [03 Develop AC Frequency Fine Adjustment]
However, when changing this setting, the background or rough image may occur.

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13 Problem with non-recommended paper

[Symptom]
When non-recommended types paper is used, paper jam, blister, or 2nd transfer problem occurs.

[Symptom in detail]
A-a : J31-01, 02 (fusing wrapping jam) occurs with thin coated paper (128g/m^2 or less) (Probable cause A-a)
A-b : J16-01, 02 (no feed) occurs with very smooth paper (Probable cause A-b)
B: Blister occurs with coated paper (Probable cause B)
C: Transfer failure occurs (Probable cause C)

[Probable causes]
A-a: Coated paper more firmly attaches with each other than normal paper. Additionally, since the coating is heavy, paper stiffness becoming less for the paper weight. Consequently, paper feed ability is low and jam occurs.
To correct this, see "15. Thin paper wrapping around the fusing belt (separation failure)" section.

A-b: Coated paper is very smooth and firmly attaches with each other. Under high humid condition, specifically thin coated paper is difficult to feed.
To correct this: 1) If using main body tray, change the tray to LU or PFU.
2) For the type of paper which causes no feed, see "20. PFU, LU paper no feed under low temperatuer environment (J16-02)" section.

B: On the coated paper, the plastic is applied on the surface and air permeability becomes low. During the fusing, the air in the paper cannot escape outside and tends to cause paper blister.
To correct this, decrease fusing upper/lower rollers temperature as follows:
Change Dipswitch 1-0 (To display process adjustment to user screen) from 0(Default) to 1.
Access, (COPY (MACHINE) => [Paper Setting] => [Change] => [Process adjustment]) => [Next] => Fusing upper/lower temperature.
Reduce setting value. The target for the temperature adjustment is 10°C and (max. 20°C) and the temperature should be gradually decreased. Depending on type of paper, fusing temperature decrease may not be effective. In that case, please request customer to use different type of paper.

C: The set second transfer does not match to the characteristic of paper* being used.
* The characteristic of paper; dispersion of the paper resistance, smoothness and moisture
To correct this, set the transfer current properly from following: [Paper Setting] => [Change] => [Process adjustment] => [2nd Transfer offset Front] and [2nd transfer offset Back]

* Paper problem occurs very frequently. BT request sales company to identify whether the issue is the machine specifications or machine error at the early stage.

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14 How to adjust side1/2 Image registration

[Symptom]
How to adjust the image position difference between side 1 and side 2 in duplex print.

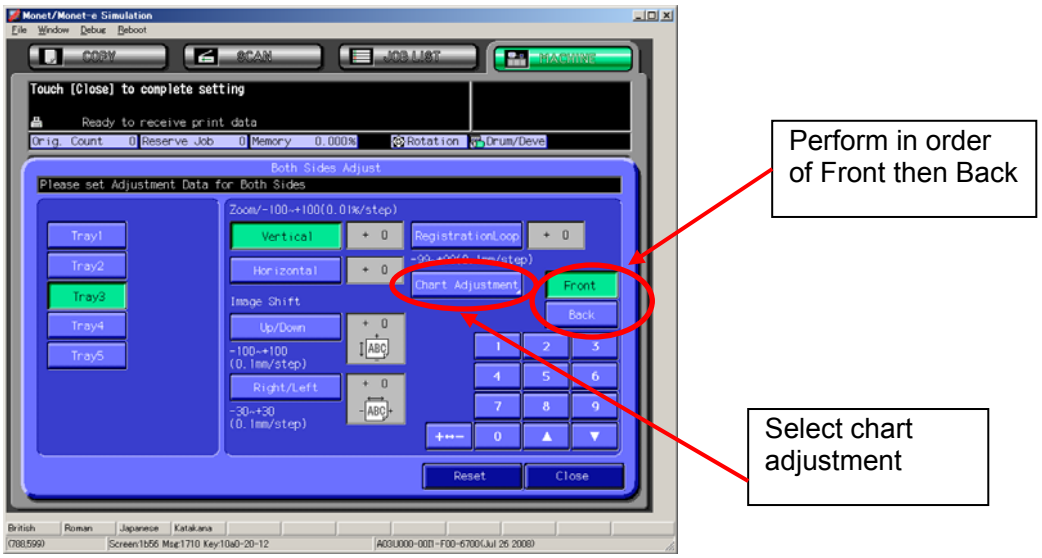
[Solution]
2 types of adjustment methods are available.
1) Perform image registration adjustment based on the difference of each machine
2) Perform fine adjustment according to the tray and paper type

Adjustment 1) Perform image registration adjustment based on the difference of each machine
Service => [01 Machine Adjustment] => [01 Printer Adjustment]
(If the machine administrator performs adjustment: [03 Machine Admin. Setting] => [01 System Setting] => [05 Expert Adjustment] =>[03 Printer Adjustment]

01 Restart Timing Adjustment
02 Centering Adjustment
03 FD-Mag. Adjustment
04 CD-Mag. Adjustment

* For the Adjustment method, refer to Service Manual.

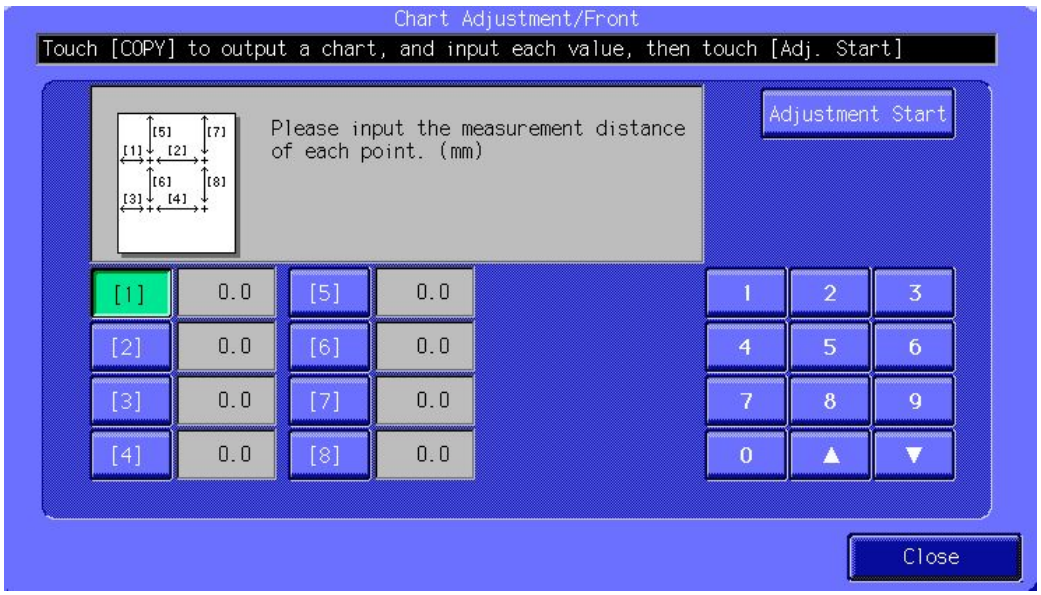
Adjustment 2) User performs fine adjustment for each tray (Both sides Adjustment)



Select the tray you want to adjust. Perform Chart Adjustments for Front side then Back side: Print the adjustment chart and measure with the scale.

CAUTION:
Back side cannot adjustment is not available with the default setting. To perform the backside adjustment, following setting should be changed.
[03 Machine Admin Setting] => [06 Common Setting] => [Side 2 Lens Adjustment mode]: ON.
Please note that the productivity decreases with this setting.

(Front side adjustment)



Print the chart and measure the specified part and input the value and press [Adjustment Start]

(Back side adjustment)

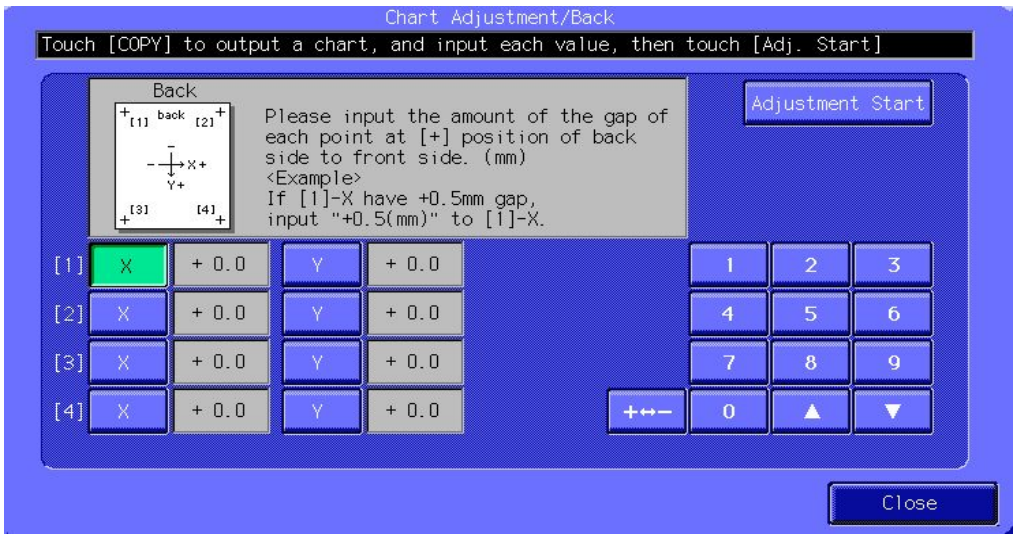


Chart Adjustment/Back
Touch [COPY] to output a chart, and input each value, then touch [Adj. Start]
Back
Please input the amount of the gap of each point at [+] position of back side to front side. (mm)
<Example>
If [1]-X have +0.5mm gap, input "+0.5(mm)" to [1]-X.
Adjustment Start
[1] X + 0.0 Y + 0.0
[2] X + 0.0 Y + 0.0
[3] X + 0.0 Y + 0.0
[4] X + 0.0 Y + 0.0
1 2 3
4 5 6
7 8 9
+↔− 0 ▲ ▼
Close

Check the difference from front side at the [+] positions and input the value, press [Adjustment Start].

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15 Thin paper jams wrapping around the fusing belt (separation failure)

[Symptom]
When printing image where 2 or more colors (red, blue, green, etc.) are overlapped and much amount of toner attaches on coated paper, paper wraps around the fusing belt and jams.

[Available thin paper with C6500 series]
Under NN environment, paper that can be separated with no problem with 2 or more overlapped color (red, blue, green) solid image is as follows. (rough indication).
Caution:
Though 2 or more colors solid cannot be separated, usual practical graphic image can be separated in some cases. Therefore, please judge carefully according to the usage of customer.
Additionally, if the solid part is at far from leading edge of the paper, the separation is rather easier.

1) Normal paper: no fusing wrapping jam with 80gsm or heavier paper
2) Electrophotographic coated paper:
   [Japan] no fusing wrapping jam with 100gsm or heavier paper.
   [USA, Europe] no fusing wrapping jam with 120gsm or heavier paper
3) Coated paper for printing:
   Short grain (paper grain is the same as the paper feeding direction): no fusing wrapping jam with 105gsm or heavier paper.
   Long grain (paper grain is the vertical to the paper feeding direction): no fusing wrapping with 128gsm or heavier

[Solution]

1) If the coated paper for printing and electrophotographic coated paper with short grain (paper grain is the same direction as the paper feeding direction) is available, use it.
   Caution:
   a) Not much type paper with short grain is available other than Japan.
   b) When using the short grain paper, if making duplex copy, slight wrinkle may appear at the paper exit decurler part. In that case, change DipSW 4-4 from 0 to 1 or reduce fusing temperature from Paper setting:
      Change dipswitch 1-0 (To display process adjustment to user screen) from 0(Default) to 1. Then, [Process adjustment] key is accessible from COPY (or MACHINE) screen. Access (COPY (MACHINE) => [Paper Setting] => [Change] => [Process adjustment] => [Next] => [Upper roller Temperature] and [Lower roller temperature]. Reduce both rollers temperature. The target for the temperature adjustment is 10°C and (max. 20°C) and the temperature should be reduced gradually.
2) When controller property => [Image] => [Toner reduction] is set, the max attaching toner amount is decreased and the separation ability is increased. However, please note that the toner density decreases.
3) Perform the following adjustment to reduce the toner quantity.
   [Utility/Counter] => [03 Machine Admin. Setting] -> [01 System Setting] -> [05 Expert Setting] -> [06 Process Adjustment] -> [03 Toner Quantity/Exposure]
   Lower [Maximum toner quantity] of yellow, magenta, cyan and black.

If the above action could not resolve the jam occurrence or the customer cannot be satisfied with the image density after adjustment, instruct the customer to use other type of paper.

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16 Blurred image

[Symptom]
Toner scatters around color characters as if the characters are blurred.

[Probable cause]
More toner is attached on multiple-color character than on single color character. As toner layer is thick, discharge may occur during image transfer process, causing toner scattering to occur.

[Solution]
Reduce toner attachment quantity of the color of blurred character and then perform the controller calibration.
For example: If the character is red, lower [Maximum toner quantity] of yellow and magenta.

[Utility / Counter] => [03 Machine Admin. Setting] => [01 System Setting] => [05 Expert Setting] => [06 Process Adjustment] => [03 Toner Quantity/Exposure]

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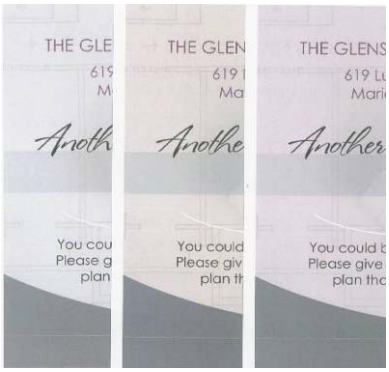
17 Change of color

[Symptom]
When ambient environment or media changes, color changes.



[Probable cause]
Image forming process features changes due to the change of environment (temperature and humidity) and media and effect of previous job coverage.

[Solution]
Perform Auto gamma Adjustment from utility menu or service mode then calibration.

- If color change at highlight part is remarkable, perform Auto gamma adjustment, perform printer gamma offset adjustment, then controller calibration in order.

Auto gamma adjustment

- Service mode => [02 Process Adjustment] => [02 Drum Peculiarity Adj.] => [03 Auto gamma adjustment]
- Utility/Counter => [03 Machine Admin. Setting] => [01 System Setting] => [05 Expert Adjustment] => [08 Execute Adjust Operation] => [Automatic Gamma Adj.]

Printer gamma offset adjustment

- Utility/Counter => [03 Machine Admin. Setting] => [01 System Setting] =>[05 Expert Adjustment] => [07 Quality Adjustment] => [01 Printer Gamma Offset Adj.]

Calibration (Refer to 34. Calibrtaion Procedure)

- Follow to procedure specified for each controller. To perform accurate calibration, perform calibration using the actual paper with the specific setting of paper type and paper weight.

CAUTION: Please note that Printer Gamma Offset Adj. result affects both copy and printer gradations.

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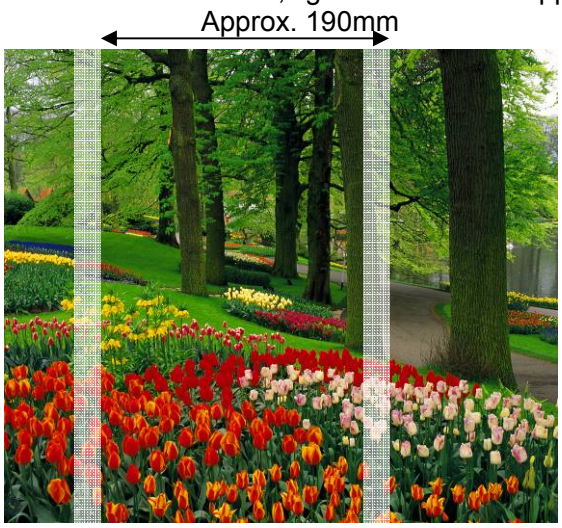
18 White Streaks (drum memory)

[Symptom]
In main scan direction, light white streaks appear at approx. 190mm interval.



[Probable cause]
If the humidity on the drum surface is different at enclosed space of the cleaning section and other part, the symptom appears by the cycle of drum rotation.
Symptom tends to occurs if the machine is shut-off then restarted after interval or started up first time in the morning.

[Solution]
1) From service mode or utility menu, perform Auto gamma adjustment several times.

- Service mode => [02 Process Adjustment] => [02 Drum Peculiarity Adj.] => [03 Auto gamma adjustment]
- Utility/Counter => [03 Machine Admin. Setting] => [01 System Setting] => [05 Expert Adjustment] => [08 Execute Adjust Operation] => [Automatic Gamma Adj.]

2) Change the setting for the photoconductor drum tiny rotation. (Preventive measure)
Service mode: [03 System Setting] =>[01 Software SW Setting]
CAUTION: The life of the photoconductor drum becomes shorter.
DipSW26-7
1: Operates at HH environment only (default)
0: Always operates regardless of the environment

Service mode: [02 Process Adjustment]=>[05 Interval/Quantity Adj.]
=>01 Drum Tiny Rotation Interval => +3:3 minutes (default)
Set to +1:1 minute

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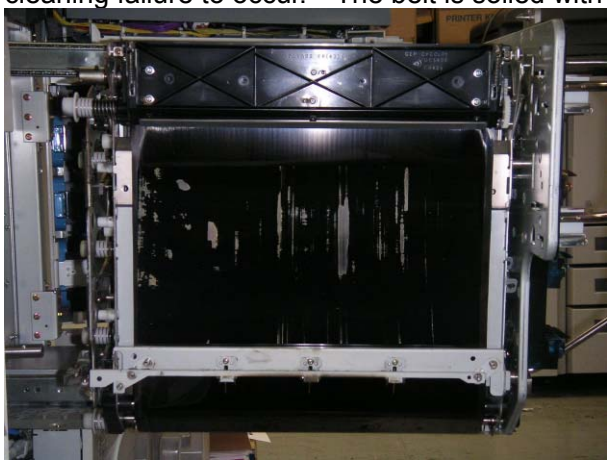
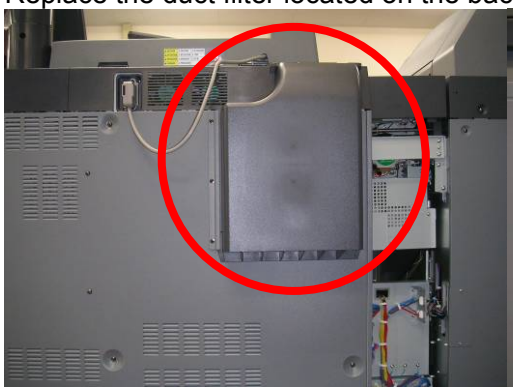
19 Waste toner packing

[Symptom]
Image is soiled in paper feed direction (sub-scan direction)

[Probable cause]
The rear duct filter is packed with dust or toner and the machine internal temperature rises. As the result, waste toner in the belt cleaning unit melts and then hardens up, causing the belt cleaning failure to occur. The belt is soiled with toner



[Solution]
Replace the duct filter located on the backside of main body.



Rear side

Right side

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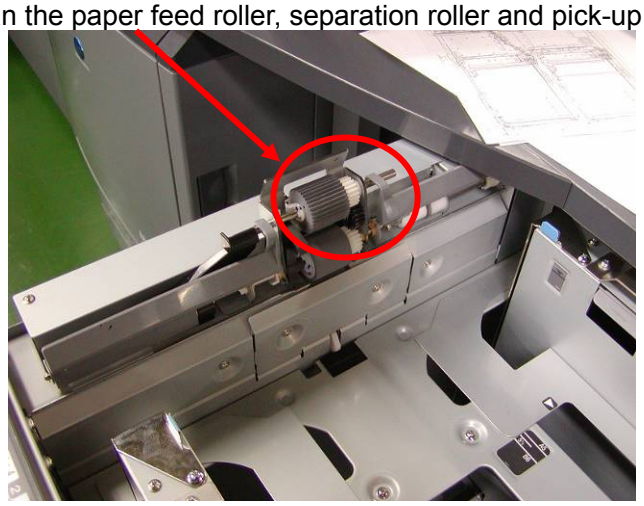
20 PFU, LU paper no feed under low temperature environment (J16-02)

[Symptom]
Under low temperature environment, PFU no feed jam (J16-02) occurs with coated paper.

[Probable cause]
Plastic component of coated paper attaches on the paper feed roller, separation roller and pick-up roller of PFU. Frictional coefficient of the pick-up roller surface decreases.

[Solution]
1) Clean the paper feed roller, separation roller and pick-up roller.

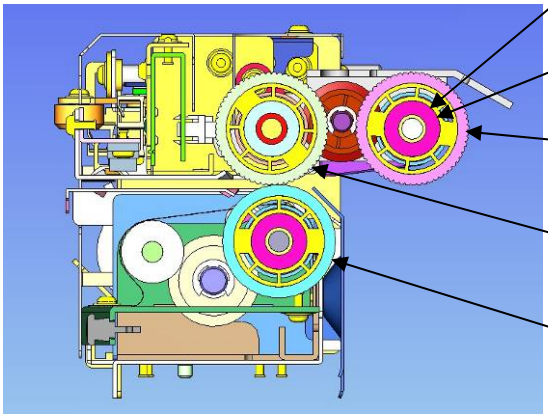


2) Replace the pick-up roller with the improved type.

PF-601
Improved type has been installed to the PFU from A03XWW0000572

For the first time replacement, it is recommended to replace by the following unit
A03XR71000 pickup ASSY
A03XR70900 paper feed assy

PF-601



Pickup gear
55VA7914

Pick up roller collar
50BA4022

Pick up roller
A03X5652

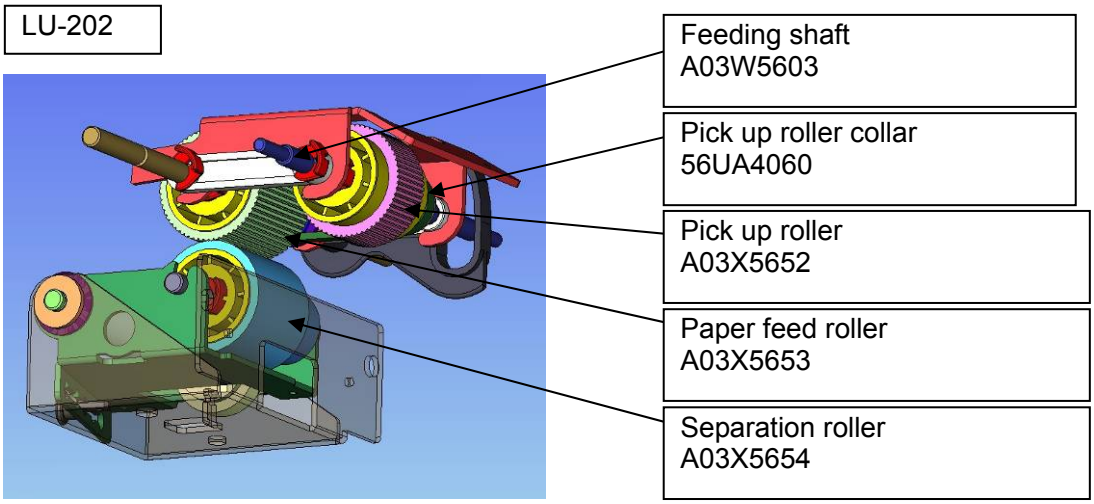
Feed roller
A03X5653

Release roller
A03X5654

LU202

Improved type has been installed to the LU from A03X0Y0000945.

For the first time replacement, it is recommended to replace by the following unit
A03WA5621 Feed roller assy
A03WA5641 Feeding roller assy



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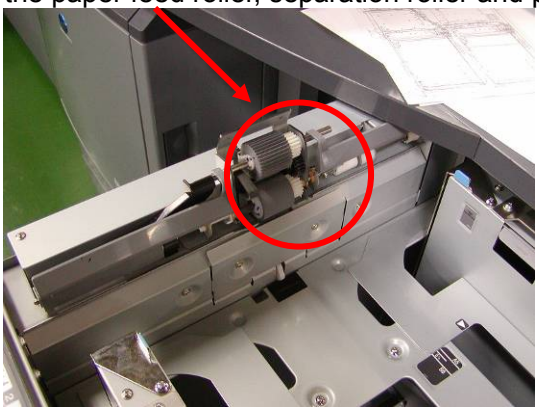
21 Gloss unevenness on side2 of coated paper (PFU, LU)

[Symptom]
Gloss becomes uneven at the central part on the side 2 of coated paper fed from PFU.

[Probable cause]
Plastic component of coated paper attaches on the paper feed roller, separation roller and pick-up roller of PFU. Then the paper slips on the separation roller on feeding. The slip remains on the coated paper as gloss unevenness.

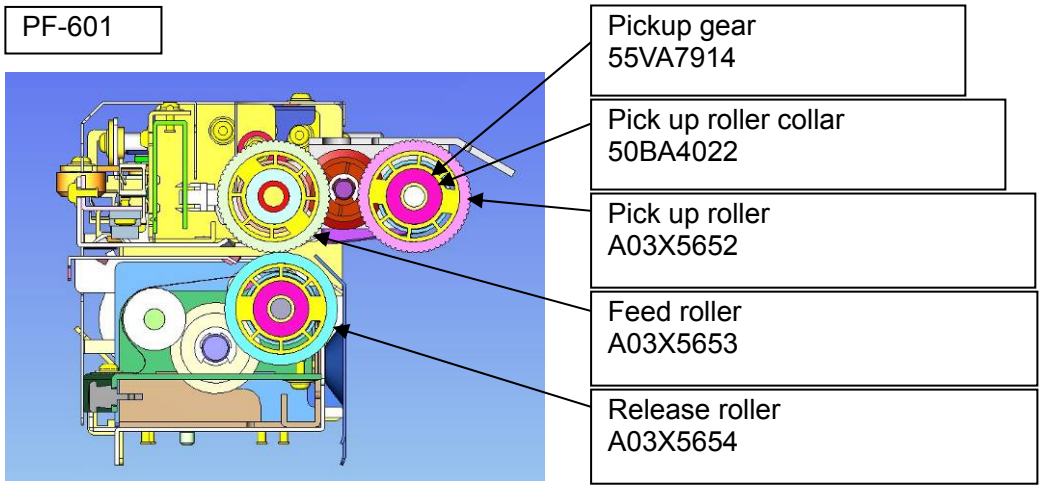
[Solution]
1) Clean the paper feed roller, separation roller and pick-up roller.



2) Replace the pick-up roller with the improved type

PF-601
Improved type has been installed to the PFU from A03XWW0000572

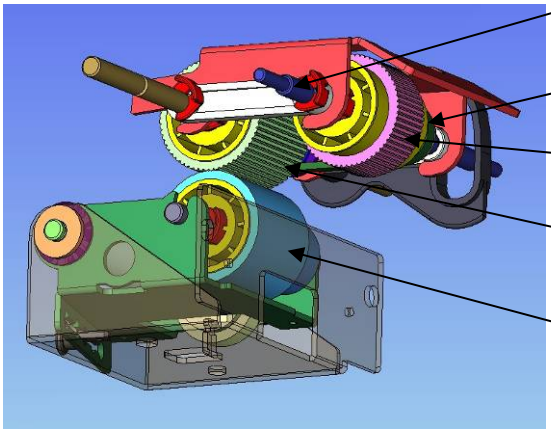
For the first time replacement, it is recommended to replace by the following unit
A03XR71000 pickup assy
A03XR70900 paper feed assy



LU202
Improved type has been installed to the LU from A03X0Y0000945.
For the first time replacement, it is recommended to replace by the following unit

A03WA5621 Feed roller assy
A03WA5641 Feeding roller assy

LU-202



Feeding shaft
A03W5603

Pick up roller collar
56UA4060

Pick up roller
A03X5652

Paper feed roller
A03X5653

Separation roller
A03X5654

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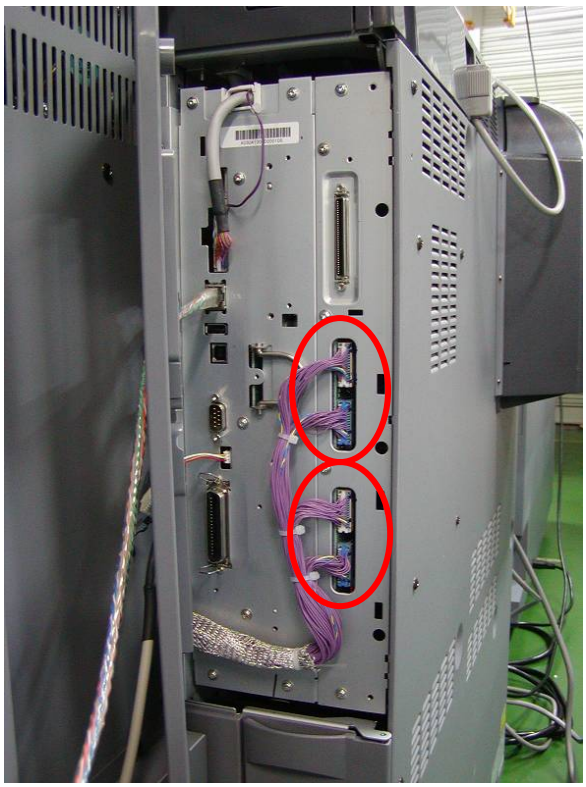
22 SC28-01 to 04 when machine is powered up

[Symptom]
SC28-01, 02, 03 or 04 occurs when machine is powered up after option HDD installation or replacement.

[Probable cause]
The connectors of option HDD are not properly connected.

CAUTION:
Originally, SC28-01 to 04 occurs if a patch for adjustment is not created during Dmax correction in the automatic gamma adjustment. For example, it can occur by depletion of toner on the developing sleeve (Refer to 30. Depletion of developer after continuous print) patch creation position).



[Solution]
Firmly connect the connectors.

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23 SC28-31 to 34 (Charging potential correction (Vm) error)

[Symptom]
Under low humidity environment, SC28-31 to 34 occurs after displaying "Adjusting" on the operation panel or performing auto gamma adjustment manually.

[Probable cause]
If performing auto gamma adjustment under low humidity (humidity inside machine is around 10%), due to the photoconductor drum humidity characteristic, LD Power becomes saturated.

[Solution]
From the following setting menu, adjust the exposure amount for the problem color.

Utility/Counter => [03 Machine Admin. Setting] => [01 System Setting]] => [05 Expert Adjustment] => [06 Process Adjustment] => [03 Toner Quantity/Exposure] (Decrease exposure amount)

When changing the above setting, return to the normal screen. (Automatically gamma adjustment is performed.) If the problem persists, replace the problem color drum since the cause of the SC is the combination of drum characteristic and humidity.

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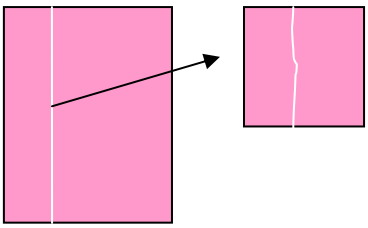
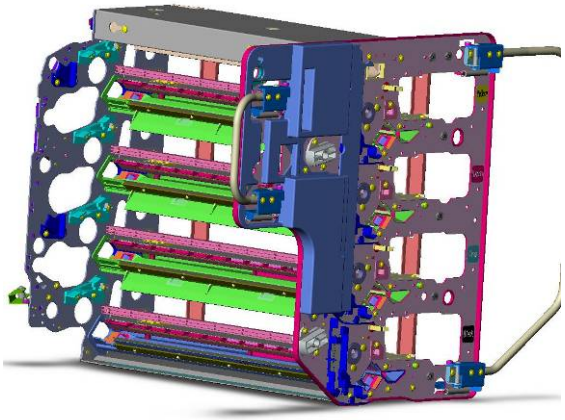
24 White (meandering) line (dust attach on PET sheet)

[Symptom] On the halftone for each color, white (meandering) line appears.

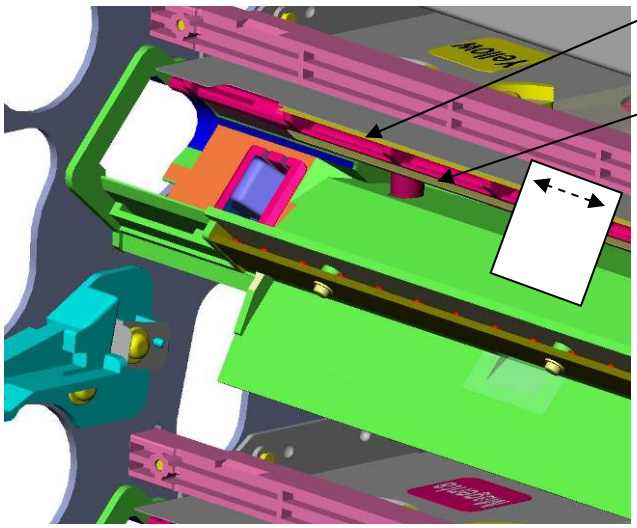


[Probable cause]
The dust attaches on the PET sheet which is equipped as the countermeasure against ozone. (under high humidity)

[Solution]
Remove charging corona for all colors and remove process carriage. Remove transfer belt and remove the drum unit on which white line appears.



PET sheet against ozone



CAUTION: This urethane sheet is different from the PET sheet.

Remove the dust with the edge of cut sheet of paper.

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25 PFU centering error (image suddenly shifts by 5mm)

[Symptom]
During continuous printing using Tray 4 and Tray 5, the image on the paper suddenly shifts by around 5 mm.

[Probable causes and solution]
The centering sensor located at the PFU exit detects paper edge and calculates the off-center amount. For the correction, the image writing position is shifted according to the detected off-center amount to achieve high accuracy of the registration between side 1 and side 2.
The off-center detection range is +/-5mm and if off-center amount exceeds the detection range, the centering correction mechanism cannot work. Consequently, the image suddenly shifts by around 5mm.
The presumed causes are following 3.
The cause differs by the problem occurrence paper side (side 1 or side2)

[CAUTION FOR THE CAUSE ANALYSIS]
- Breakage of the sensor is cause in a few cases. Therefore please check if the sensor functions correctly.

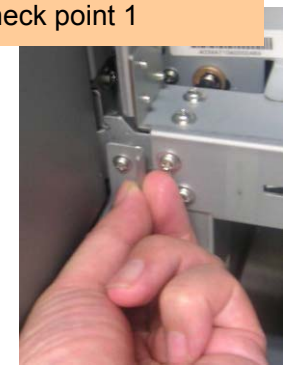
- For the 5mm shifts, the causes may be all of the 1, 2 and 3 or combination of two of them. (If both side 1 and side 2 shift, all of them may affect)

1) Side guide is not set properly.
Side guide is not set symmetrical from the center. There is a space between paper edge and side guide.
To correct it refer to 26.Centering error, skew (How to set paper on PFU)

2) Main body and PFU connection was not adjusted properly at the installation.
The main body and PFU connection was not adjusted properly at the installation and the main body and PFU height is not correctly adjusted.
To correct it, check the position of main body and PFU. If the adjustment is not enough, perform the adjustment as stated in next page.

(How to check the PFU and main body connection position)

Check point 1

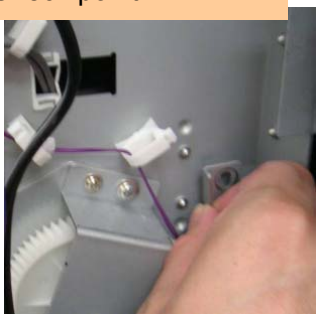


Positioning pin at front side

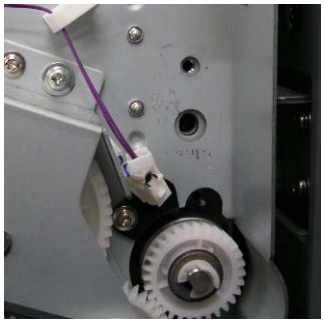
The center of the holes on the front side panel and inner side panel should be concentric and the pin can be moved smoothly.

If the hole center position is different, adjust the caster height with the lever.

Check point 2



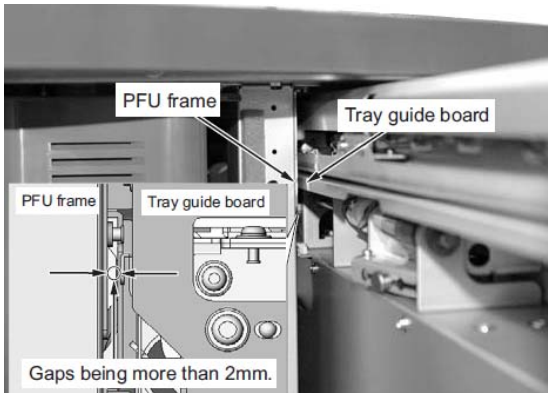
Positioning pin at rear side



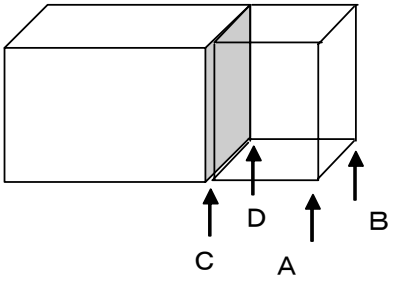
The center of the holes on the front side panel and inner side panel should be concentric and the pin can be moved smoothly.

If the hole center position is different, adjust the caster height with the lever.

Check point 3



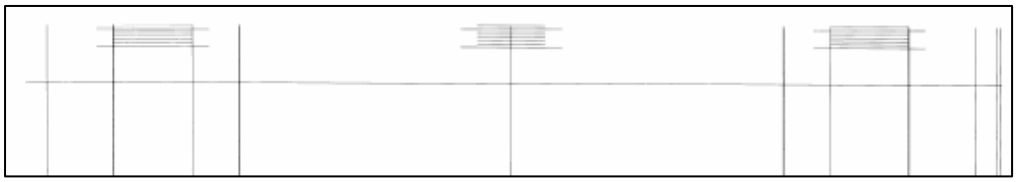
Adjust until this gap becomes 3mm (optimum value)



The gap is less than 3mm
=> Lift up B
The gap is larger than 3mm
=> Lift up A
* Height of C and D should be decided with the pin.

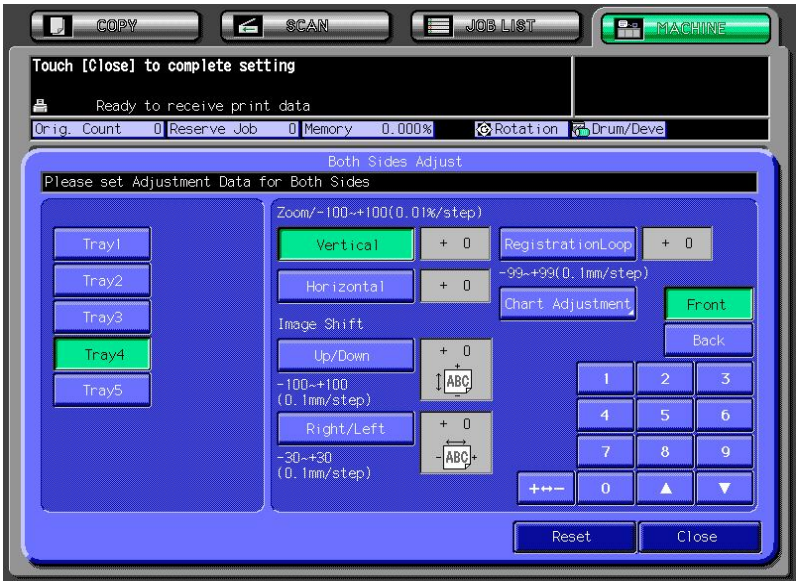
3) Centering adjustment value (for Tray 4 and/or Tray 5) is wrong

To correct it, readjust the centering adjustment of “Tray 4” and “Tray 5”.
Service mode => [01 Machine Adjustment] => [01 Printer Adjustment] => [02 Centering Adjustment]: Print the pattern and measure the off-center amount with the sale.



[CAUTION FOR THE WORK]
* For the “Tray 4”, “Tray 5” and “ADU” adjustment value, 50 and larger value cannot be entered.
* During this adjustment, PFU centering sensor should be ON (default).
  DipSW 26-4 (Printer auto centering correction PF ON: 0, OFF: 1)
  When the Printer auto centering correction sensor is set to OFF, sudden shift with 5mm will not occur but centering correction itself is not performed. Consequently, the registration accuracy between side 1 and side 2 may becomes poor.
  (Use this setting to check if the centering error is caused by sensor)
* Even if the main body and PF are connected properly, there may be the slight difference. Centering adjustment for Tray 4 and Tray 5 are to correct this difference.

After re-adjusting the centering error, exit service mode and perform side1/2 adjustment for each tray with the specific paper customer want to use. For details, refer to 14. Side1/2 image registration



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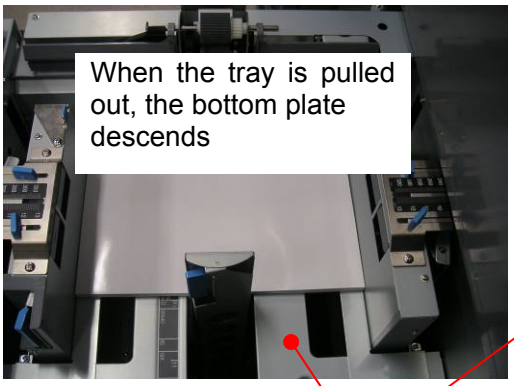
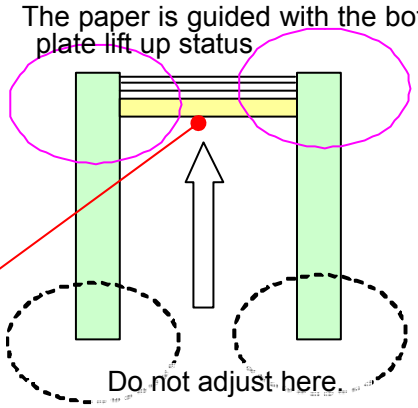
26 Centering error, skew (how to set paper in PFU)

[Symptom]
Centering error or paper skew occurs when using PFU

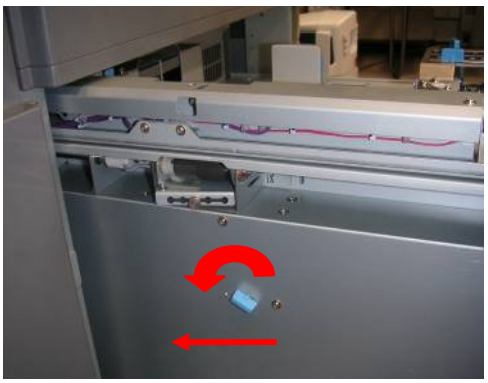
[Probable causes and solution]
Side guide plate is set improperly.
1) Side guide plate is not set symmetric at the center. To correct it, check the scale on the side guides front and rear.

2) The gap between paper edge and side guide is too wide (paper feeding is unstable)
To correct it, minimize the gap.
[How to adjust the gap between paper and side guides]
When the tray is pulled out, the bottom plate descends as shown in the following figure. Adjust the side guides position with the paper feeding position. (Bottom plate ascend position.)

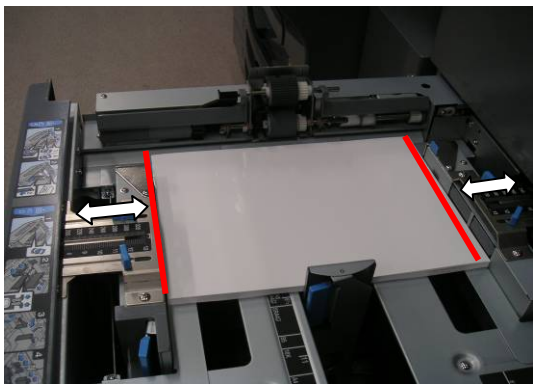




[Side view of the PFU tray]



Turn the volume and move to the rear side

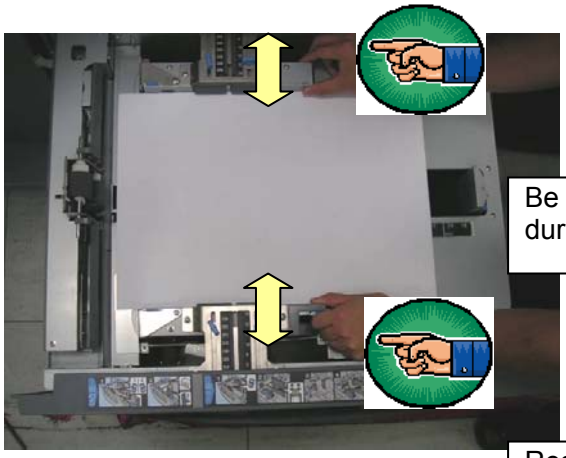


Tray does not descend. Side guide can be adjusted at the paper feeding position.

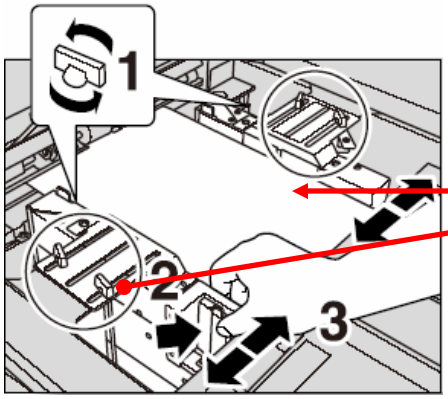
Be sure to return the volume to the original position.
If too much paper is loaded for the adjustment, the bottom plate descends with the weight of the paper. Therefore, load 5 to 10 sheets for the adjustment.

Reference: Side guide adjustment of PF-601 (Refer to User's Guide 4-11)
(1) Adjust the side guides with both hands

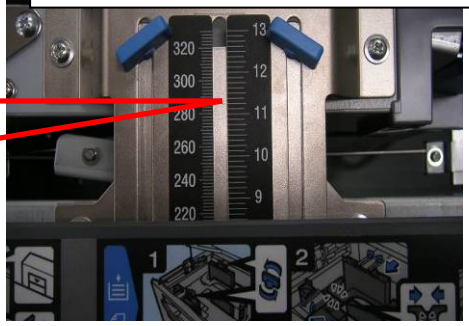
If only one hand is used, only one side is moved and the side guide at the opposite sides does not move smoothly and the center of the loaded papers may slightly moves.



Be sure to use both hands during moving side guides

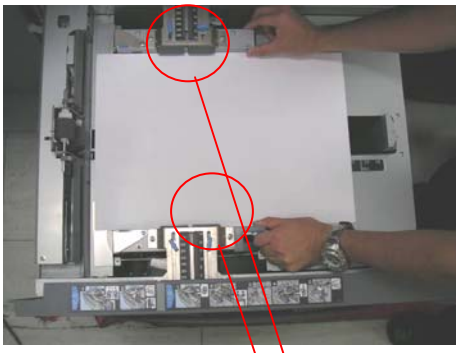


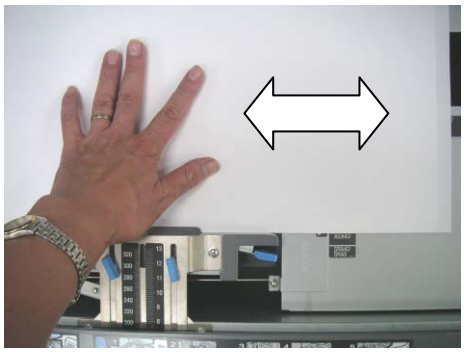
Read the indication and ensure that the value is the same between the indicators at the front and rear

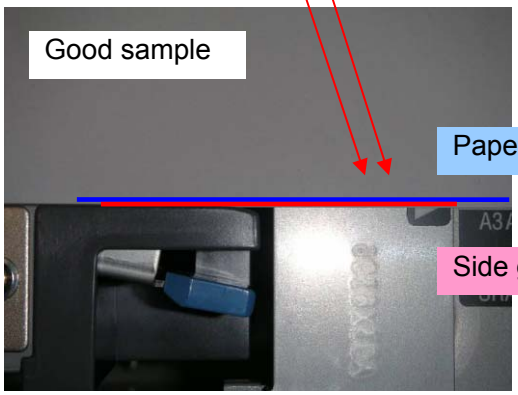


(2) Adjust the space between paper and side guides.

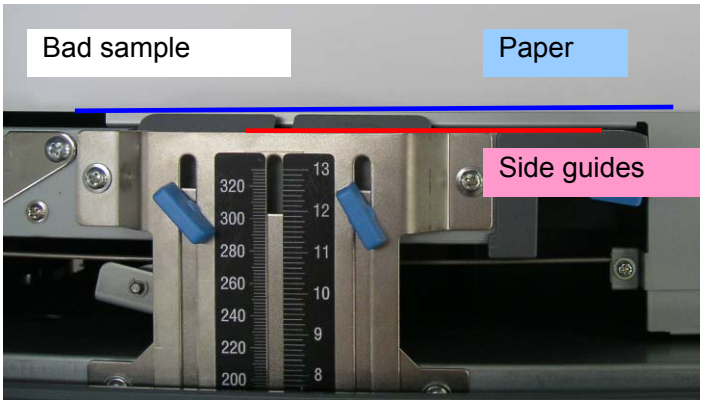
If there is too narrow gap, paper is caught with the side guide and no feed occurs.
The paper should move to the arrowed direction without any resistance.





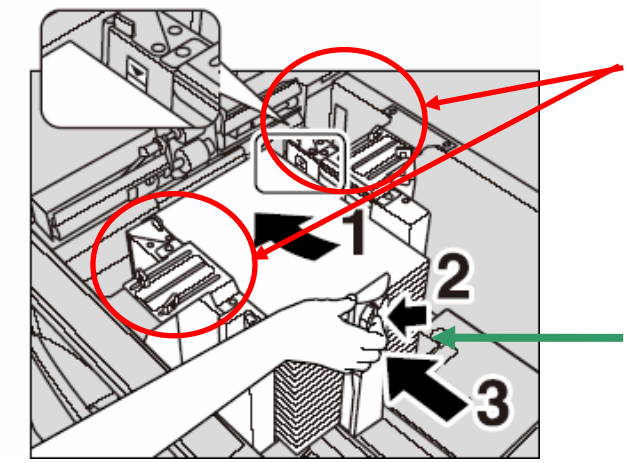


The gap between paper and side guide should be 0.1 to 0.2mm



The gap between paper and side guide is 1mm or more.
The paper is not fed smoothly during feeding and skew occurs.

(3) How to load paper
Since side guides were already adjusted, do not move them. Move only trailing edge guide.



Because side guides were already adjusted, do not move them.

Move only trailing edge guide to load paper.

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27 Print job is not accepted while machine indicates dehumidifying

[Symptom]
The machine indicates dehumidifying and print job is not accepted for a while.
Optional HT-50X is equipped.

[Probable cause]
When dehumidifier heater is installed to the tray to enhance coated paper feeding ability under high humidity environment (humidity is 56% or over), printing is not accepted until the sensor in the tray detects certain temperature with the default setting.
For example, even dehumidifying completes once then the tray is pulled out, “dehumidifying” is displayed.

[Solution]
Change the setting of DipSW18-4 Print during temperature control by dehumidifier heater from 0: Prohibited => Allowed
The machine receive print job even during the warming up of dehumidifier heater.

[CAUTION]
* Since dehumidifying operation does not complete, no feed jam of the coated paper under high humidity tends to occur.
* Even under high humidity environment, no feed occurs mostly on coated paper. Therefore, dehumifying is performed only for coated paper.

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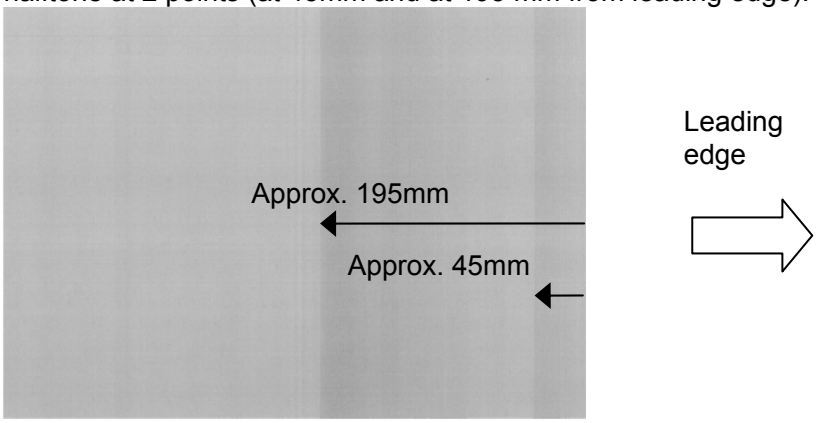
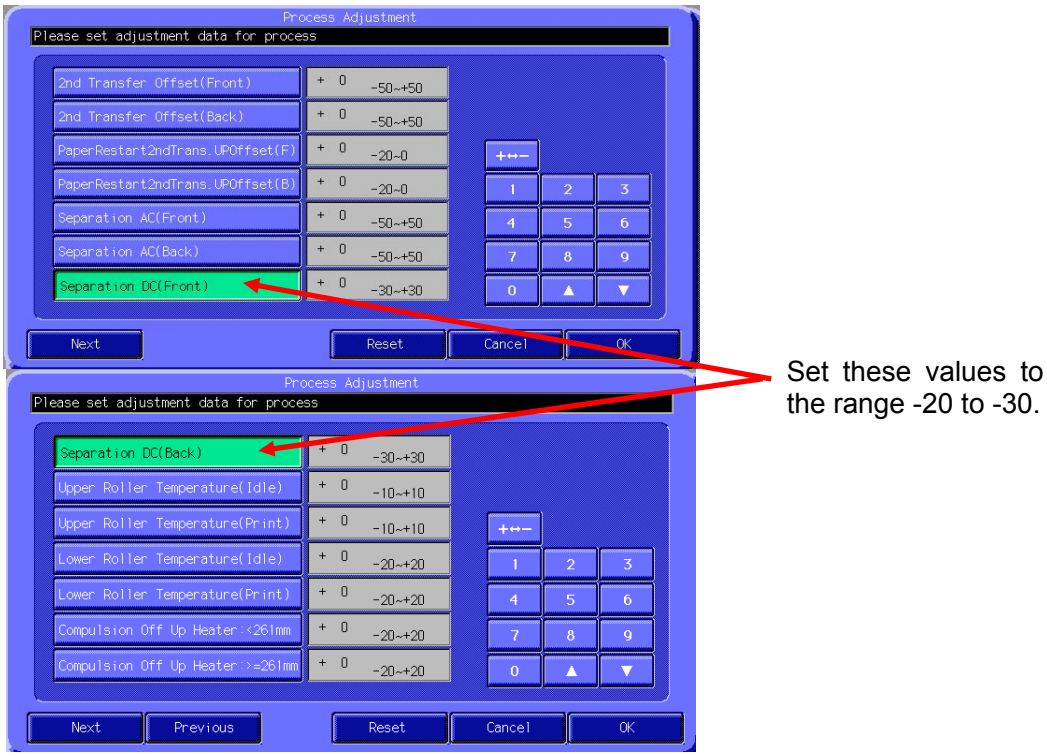
28 Transfer shifts with halftone on thick paper under high humidity

[Symptom]
Under high humidity environment (70%Rh and over) and when thick paper is used, density change appears on halftone at 2 points (at 45mm and at 195 mm from leading edge).



[Probable cause]
Separation DC current is improper.

[Solution]
1) With dipswitch setting, enable process adjustment for each tray.
   Service mode=> [03 System setting] => [01 Software SW Setting] : Change 01-0 from 0 to 1.
2) For each tray, process adjustment, set the [Separation DC (Front)] and [Separation DC (Back) optimum value within -20 to -30 so that the density difference is the least visible.



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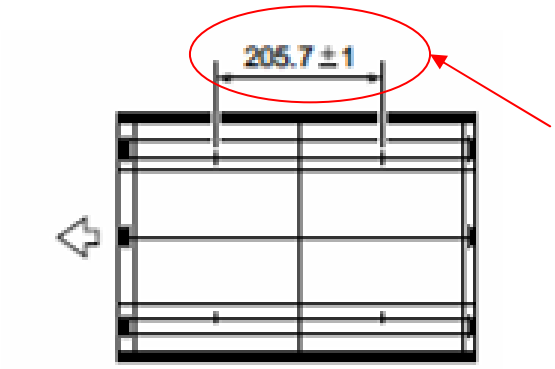
29 Drum drive error C-22xx

[Symptom] C-22xx Drum drive error occurs

[Probable causes and solutions]

1) Difference of line speed between intermediate transfer belt and drum is too large. As the result, the torque becomes lighter.
   To correct it, perform following
   a) Check the value of belt line speed
      Service mode => [01 Machine Adjustment] => [01Printer Adjustment] =>[08 Belt Line Speed Adj.]: Check the value of belt line speed. It should be within -5 to -35. If the adjustment result does not correspond to the adjustment value stated in the Service Manual with the setting -5 to -35,
      Please also perform FD-Mag. Adjustment.
      Service mode => [01 Machine Adjustment] => [01Printer Adjustment] =>[03 FD-Mag. Adjustment]
      * Please refer to Service manual [10.3.3 FD-Mag. Adjustment] and [10.3.8 Belt Line Speed Adjustment] for details.



The adjustment range is +/- 0.1.

   b) Even belt line speed is re-adjusted, drum drive error recurs or if the setting value is within -5 to -35, perform fine adjustment of the drum line speed.

      Service mode => [03 System Setting] => [01 Software SW Setting]
      DipSW21-6, 7

Bit6	Bit7	
0	0	:Default
1	0	:0.1% up
0	1	:0.2% up (recommended setting)
1	1	:0.3% up

2) Drum blade flipping occurs
   To correct it, replace drum unit

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30 Depletion of developer after continuous printing

[Symptom]
After printing low coverage continuously (5% or less coverage, 10,000 prints or more), the color used for the low coverage and continuous printing partially becomes too light. When checking the developer in the developing unit sleeve, the developer is not conveyed partially.

[Probable cause]
During continuous printing of low coverage, the toner in the developing unit was not consumed and the fluidity of toner becomes too low.

[Solution]
Change the setting of Auto Refresh Interval.
Service mode => [02 Process Adjustment] => [05 Interval/Quality Adjustment] => [02 Auto. Refresh Interval]: Execution existence : ON
Execution frequency : middle
Refresh quantity : middle

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31 Abnormal Image

[Symptom]
During printing multiple sets of a job, the abnormal image as shown in below suddenly appears and it continues until the end of job.
=> When power switch of main body is turned OFF/ON, the machine returns to the normal printing.

- Negative-positive reversed like image
- Like the posterlization applied image with the abnormal gradation
- Colored background

[Probable cause]

- Noise on the communication between controller and main body is the cause.
  Possible factors for noise occurrence are multiple.
  1) **Connection failure** between main body, controller, I/F board and cables.
  2) Device operation clock switch during data communication

[Solution]
Noise occurrence factor is not just one. Therefore, it is necessary to classify the cause and to take appropriate solution. Check following points

1. Is main body and controller connected properly?
=> Check connection of the cables.
Disconnect and then connect the connectors again.

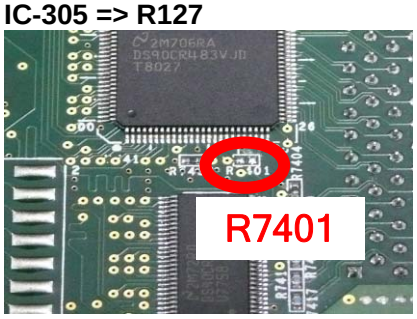
2. Is the C6500/C5500 Image Processing Board countermeasure applied type?
*** Subject is C6500/C5500 only.**
<Old type>
A03UH0200x : Old type board
=> Remove pull-up register R144 from the board.

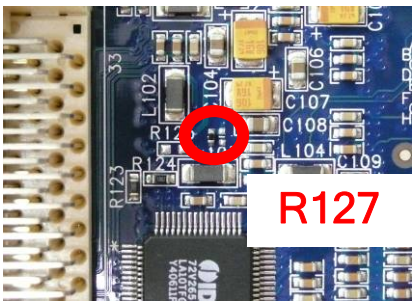
<New type>
A03UH0201x : Pull-up register R144 is already removed.
A03UH0202x onwards: Countermeasure applied board. => DO NOT remove pull-up register.
=>Check the factors of the controller side.

3. Is pull-up register on controller I/F board removed?
If the subject pull-up register is installed, remove it.
It is removed as the factory default from the following s/no

Fiery controller S/N cut-in of the countermeasure	
Model	Cut-in
IC-303, IC-305	T00194793
IC-408	T00194113
Spare part	T00194520

<The pull-up register to be removed, if necessary>
IC-303/305/408 => R7401
IC-305 => R127





4. With old type boards but the registers are removed, if the symptom occurs,
=> Replace to the countermeasure applied boards.
C6500 Image processing board: A03UH0202x onwards
Fiery I/F board: Refer to the following cut in information below

Fiery controller S/N cut-in of the countermeasure	
Model	Cut in
IC-303, IC-305	T00194793
IC-408	T00194113
Spare part	T00194520

5. Check interface cable
=> Check if the interface cable works properly. Replace it as needed.
BT P/N IC-305 : A035N10000
IC-408 : 20FGN10000
BEU P/N IC-305 : 9960A0045059133
IC-408 : 9960A0045053602

[CAUTION]
* **On C6501/C5501 image processing board, the device has been changed. Therefore, SHOULD NOT remove register.**

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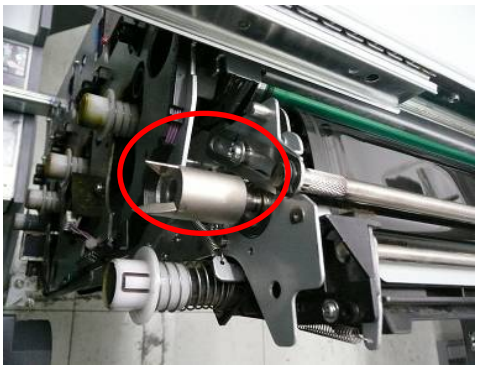
32 Coupling shaft breakage of transfer belt unit rear side

[Symptom]
When removing transfer belt unit at the maintenance and the belt is rotated, the phase of the couplings at the rear side of transfer belt unit and main body becomes different. Consequently, the process carriage cannot be inserted smoothly. At such occasion, if the process carriage is inserted forcibly, the coupling shaft of the transfer belt unit may breaks at the e-clip groove.

[Cause]
The phase of the couplings on the transfer belt unit and main body side does not match.

[Solution]
1) After removing then installing the transfer belt unit, insert the process carriage slowly and carefully.
2) If interfere is recognized at the insertion, stop the insertion once then pull out the process carriage, turn the coupling of transfer belt unit slightly then retry.



Transfer belt unit side

Main body side

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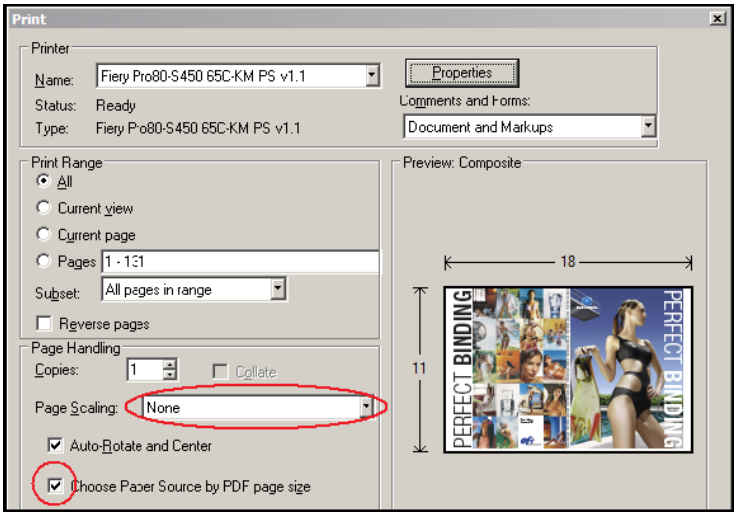
33 How to perform book printing from Adobe Acrobat (IC303/IC305)

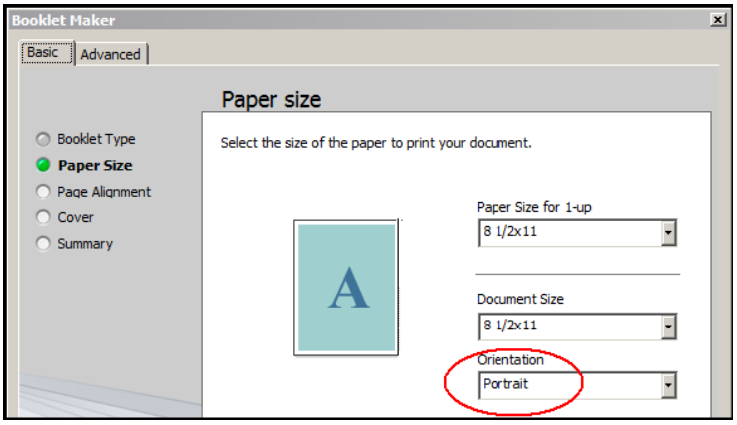
■ Booklet printing from Adobe Acrobat

When you print a booklet job from Adobe Acrobat or Adobe Reader, make the following selections in the printer driver (as shown in the following illustrations):

* Select the “Choose paper source by PDF page size” option
* Choose None from the Page Scaling menu
* Do not change Document Size
* Always choose Portrait for the Orientation

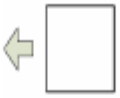
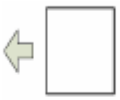
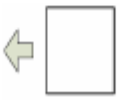
CAUTION: Even if you want to print a landscape document as a booklet, make sure to choose Portrait and Top Binding.





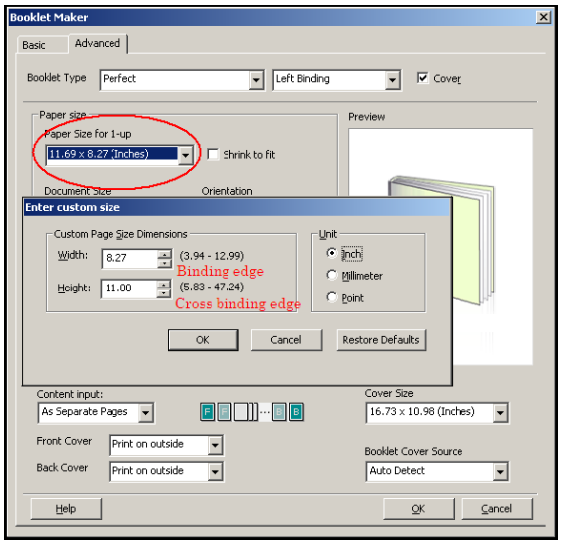
■ Using Perfect Binding with custom page size

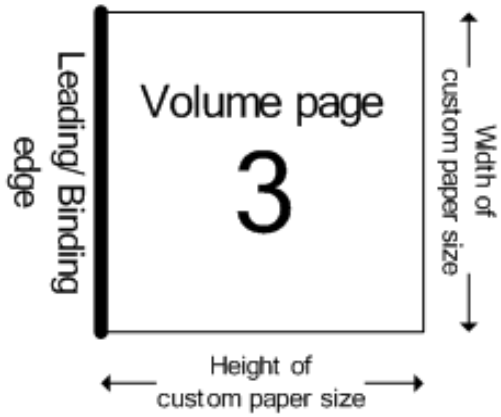
When using the perfect binding finisher, the binding position of the paper is physically determined. Therefore, it is impossible to change from the driver. In order to perform binding at the specific position, it is necessary to consider proper orientation for paper feeding. Ensure that the paper feeding side of the paper should be binding side. When feeding side is long edge (LEF), the Long side of the paper is the binding side. If feeding side is short edge, (SEF), the short edge of the paper is the actual binding side.
The following table shows the relation of paper orientation, binding position and paper feeding direction.

Document orientation	Binding edge	Paper feed direction
Portrait	Left	LEF 
	Right	LEF 
	Top	SEF
Landscape	Left	SEF
	Right	SEF
	Top	LEF 

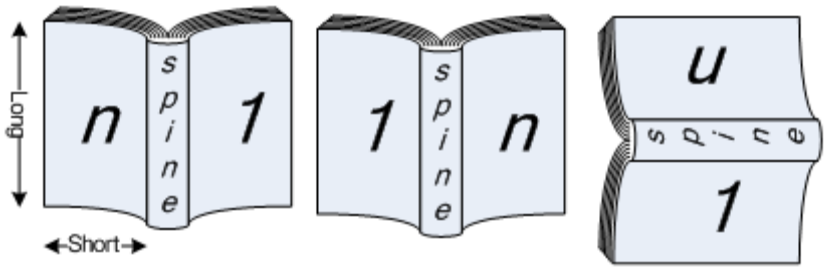
■ Body page sizes

The orientation of custom page sizes is not defined by the settings of Portrait or Landscape, but by the width and height. The width of the custom paper size indicates the binding edge. The height of the custom paper size indicates the cross binding edge.

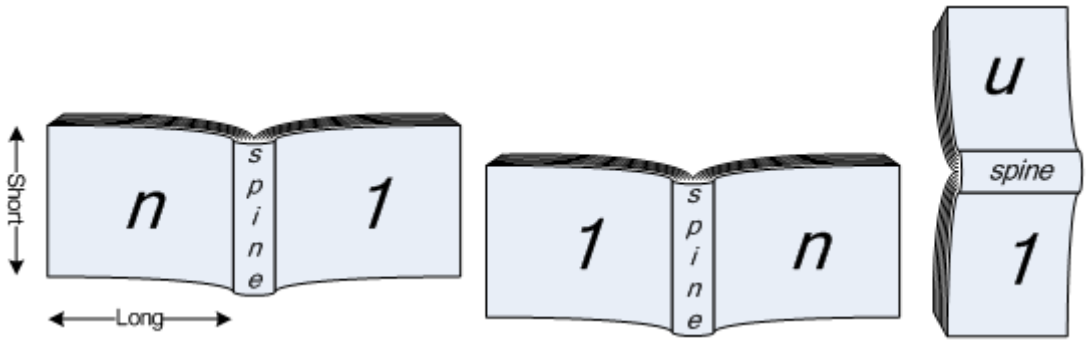




If the Width is greater than the Height, the output is bound on the long edge (see the following illustration). The paper must be fed as LEF.



If the Height is greater than the Width, the output is bound on the short edge (see the following illustration). The paper must be fed as SEF.

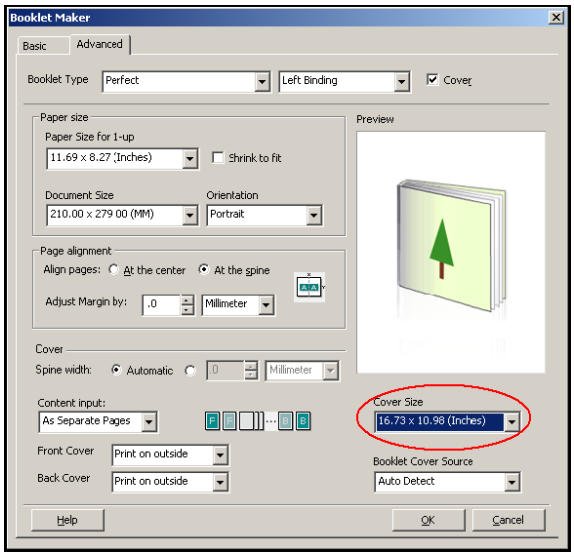


The following table shows the paper sizes supported.

Leading direction		LEF		SEF	
Units		mm	inch	mm	inch
Minimum size	Width	148	5.9	139	5.5
	Height	148	5.9	148	5.9
Maximum size	Width	307	12.0	221	8.7
	Height	221	8.7	221	8.7
Binding		Long edge		Short edge	
Paper size		Width > Height		Width < Height	

■ Cover page sizes

When you create a booklet using custom size paper, you must input the cover size manually or select it from the Paper Catalog. Booklet Maker does not automatically calculate the cover size.



■ Using As Spread option for printing a cover

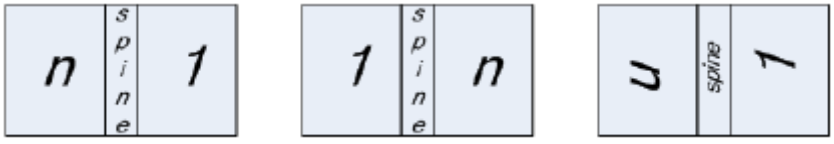
When you print a Perfect Binding job with the Perfect Binding finisher, you can choose to print the cover As Spread, which means that you print the front cover, back cover, and spine as a spread on one sheet of paper.

■ Preparing the cover content

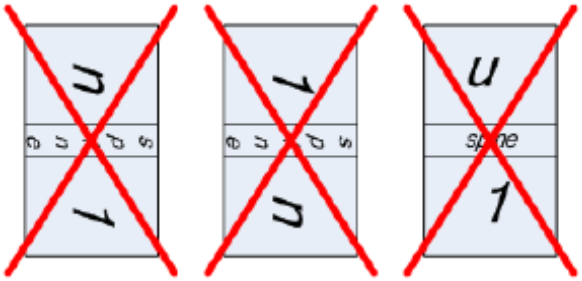
When preparing the cover content for As Spread, you must create the cover image as a landscape document in the application that you use. Printing an As Spread cover is not supported for portrait documents.

Supported and non-supported layouts are shown in the following illustration.

Supported



Non-supported

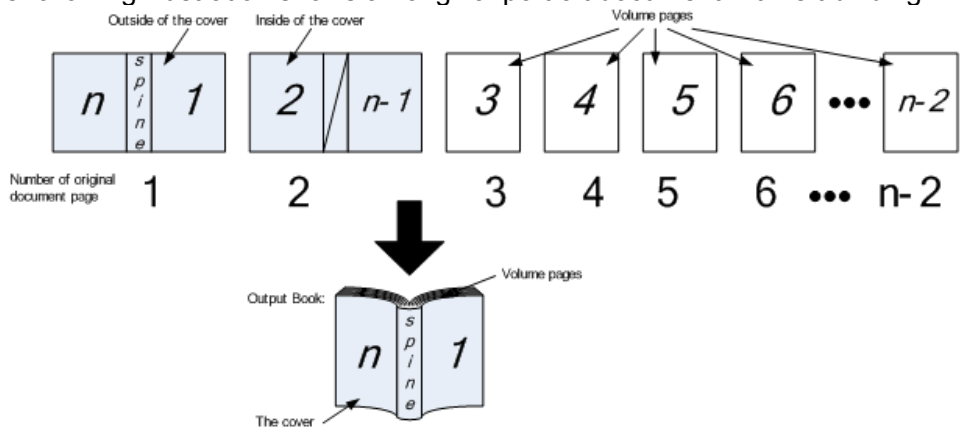


■How original document relates to output book

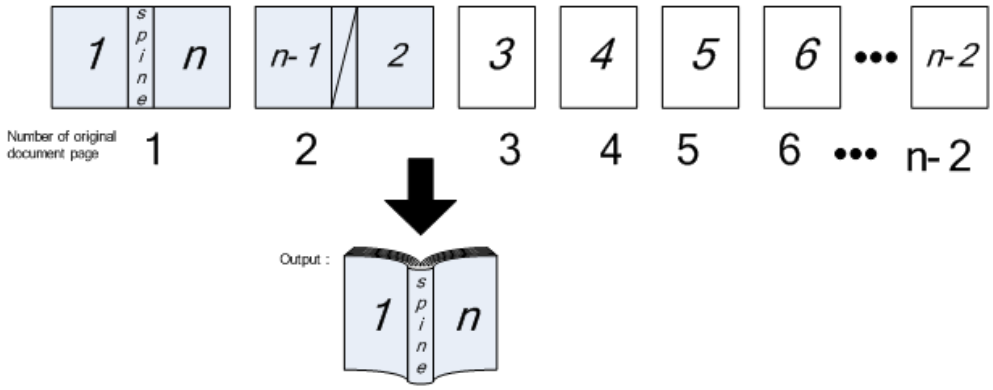
If you create a mixed size document and the cover is printed on a larger size paper than the body page, you can choose to print both sides of the cover, or outside of the cover.
If you choose both sides of the cover, the following is true:

- The first page of the original document is the outside cover image of the output book.
- The second page of the original document is the inside cover image of the output book.
- The third page and later pages of the original document are body pages of the output book.
- If you choose outside of the cover, the following is true:
- The first page of the original document is the outside cover image of the output book.
- The second page and later pages of the original document are body pages of the output book.

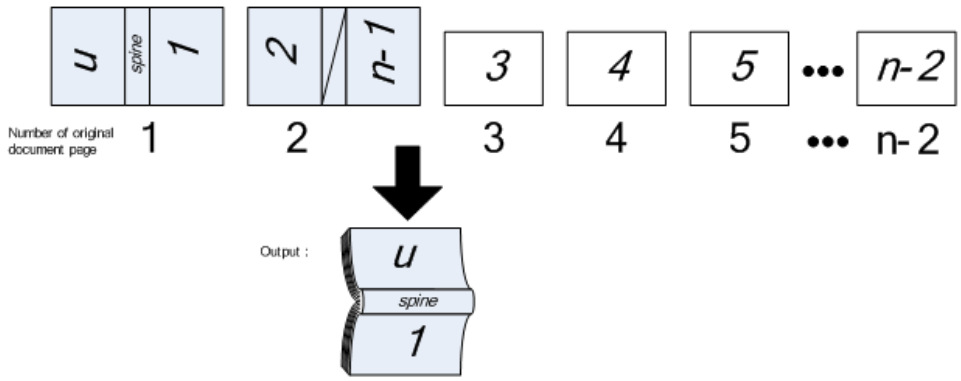
The following illustration shows an original portrait document with left binding.



The following illustration shows an original portrait document with right binding.



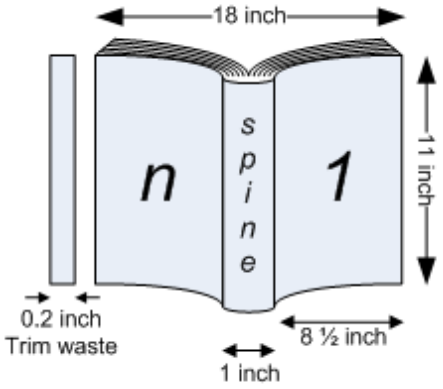
The following illustration shows an original landscape document with top binding.



■ Using Microsoft Word to create a booklet with As Spread cover from Windows

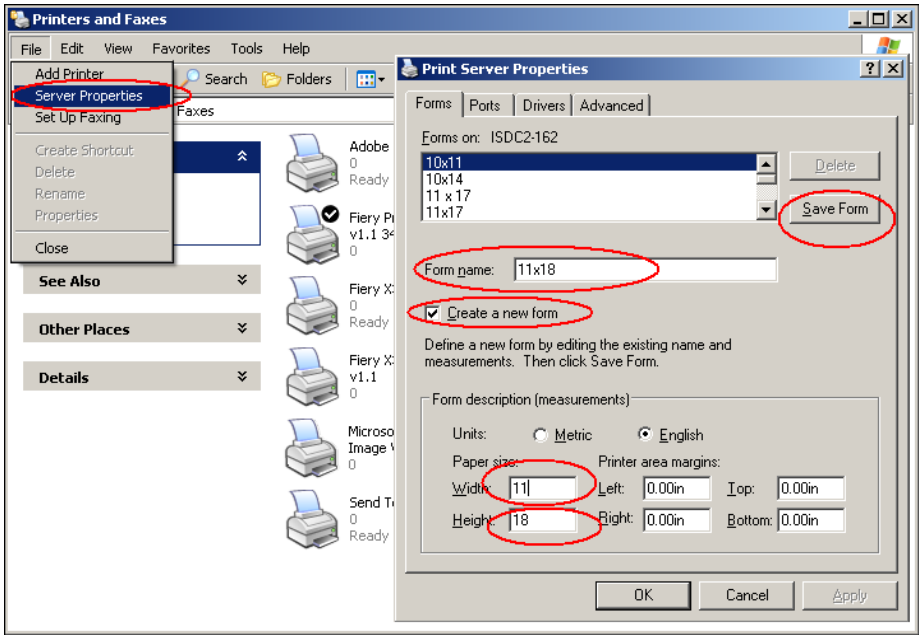
Using Microsoft Word to create a booklet with As Spread cover from Windows
This section provides an example of a workflow printing a book from Microsoft Word.

The sample book is 8-1/2 x 11 inches and 1-inch thick. The body pages are 8-1/2 x 11.
The cover image is 11 x 18, and the cover paper is 11 x 18.2 inch. The width of the trim is 0.2 inch.
The following procedure is for a Windows computer.



TO CREATE THE SAMPLE BOOKLET IN MICROSOFT WORD
1 Log on to the Windows computer as an Administrator.
2 Open Printers and Faxes, or Printers, from the Start menu, or from the Control Panel.
3 Choose Server Properties.
4 Click the Forms tab.
5 Select Create a new form with the following properties:
· Form name: 11 x 18
· Width: 11 inch
· Height: 18 inch
6 Click Save Form.

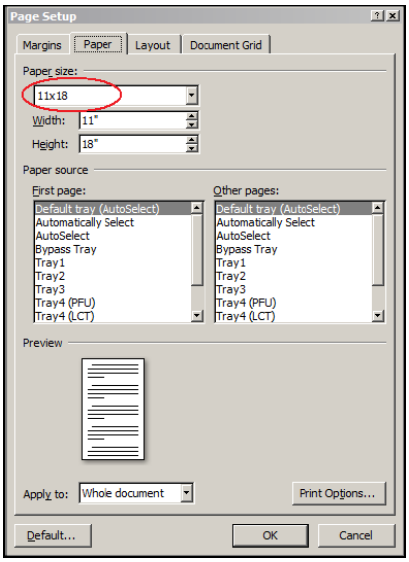
Steps 3 through 6 are shown in the following illustration.

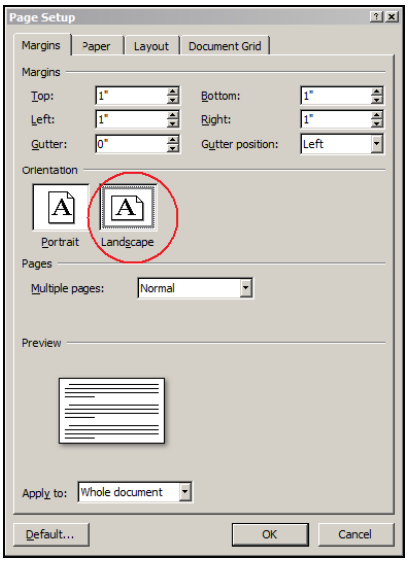


7 Close the Server Properties, Printers, and Control Panel windows.
8 Open Microsoft Word.
9 Choose Page Setup from the File menu, and then click the Paper tab.
10 Choose 11 x 18 from the Paper Size drop-down menu.

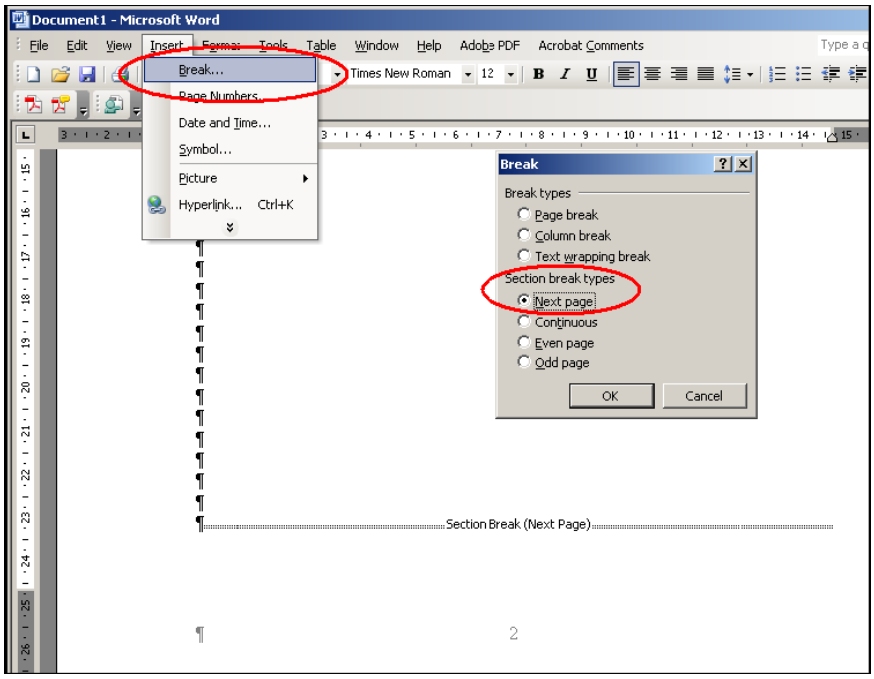
11 Click the Margins tab, choose Landscape as the Orientation, and then click OK to close the Page Setup window.

Steps 9 through 11 are shown in the following illustrations.

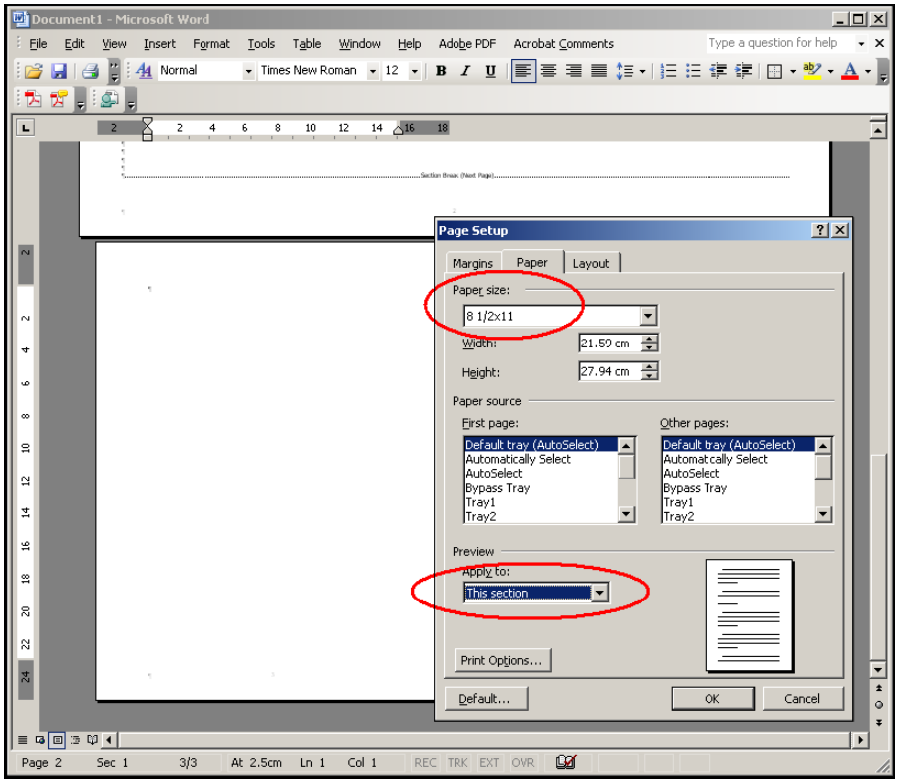




12 In Microsoft Word, create a two-page cover image and insert a section break at the end of the second page.

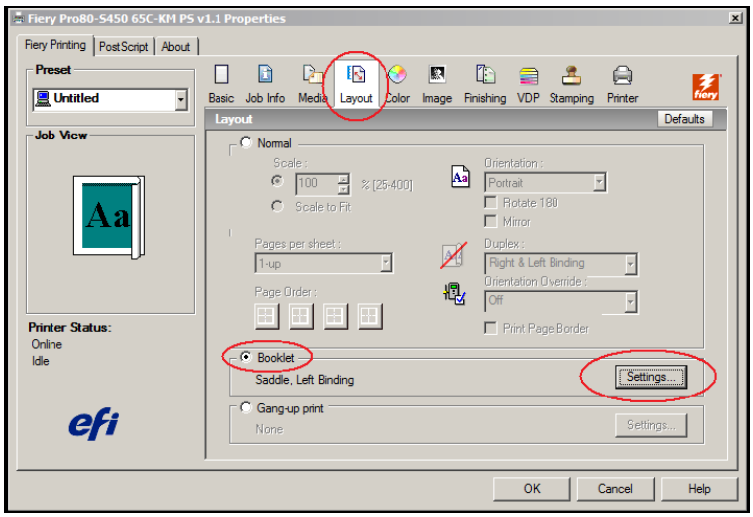


13 Select the third page and choose Page Setup from the File menu.
14 Click the Paper tab and choose This Section from the Apply To menu.
15 Choose Letter for the Paper Size.

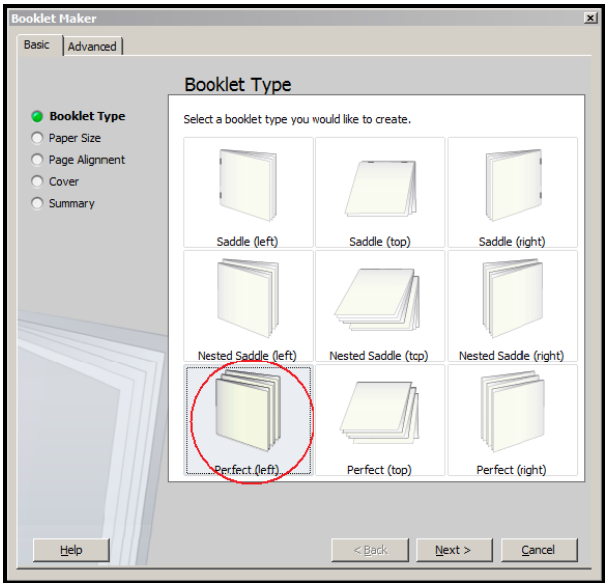


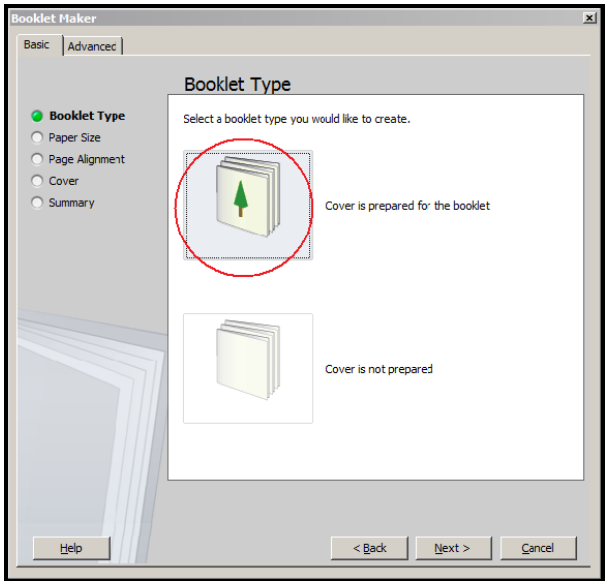
16 Click the Margins tab, choose Portrait or Landscape from the Orientation menu, and then click OK.

17 Create 20 to 600 body pages (10 to 300 sheets) in your document and save the document.
18 Choose Print, select Properties, and open Fiery Printing (or Printing Preferences).
19 In the Fiery Printing window, click the Layout tab and select Booklet.

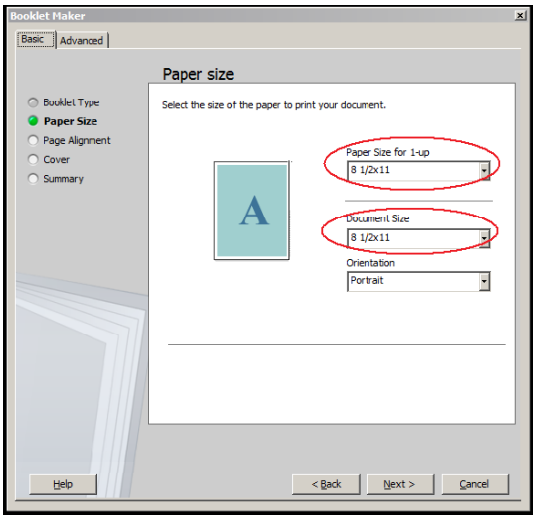


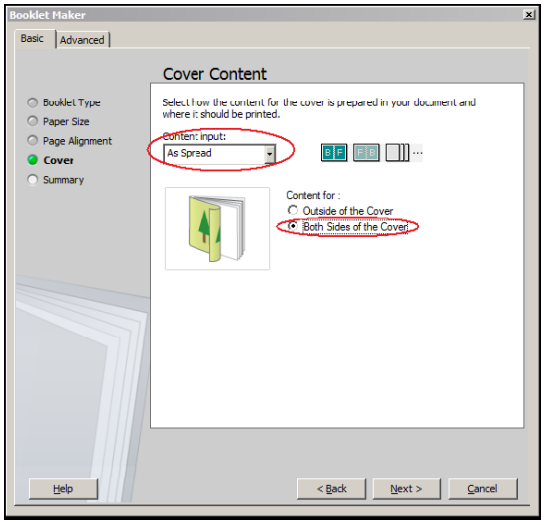
20 Click Settings to open the Booklet Maker window, and then select the following:
- Booklet Type: Perfect (left), Perfect (right), or Perfect (top)
- Cover Is Prepared for Booklet.



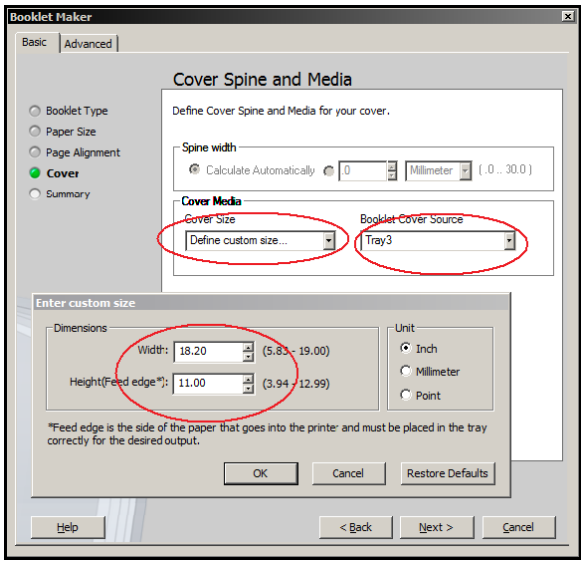


- Paper Size and Document Size: 8-1/2 x 11
- Orientation: Portrait or Landscape
- Page Alignment: Enter any value
- Content Input: As Spread
- Content: Both Sides of the Cover





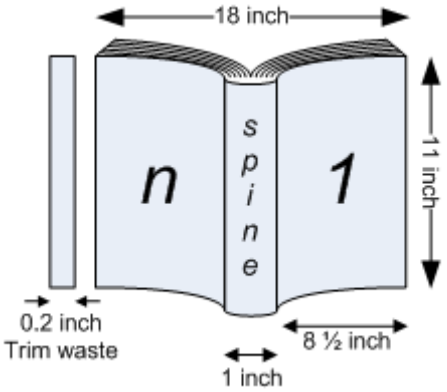
- Cover Size: Define Custom Size
- Width: 18.2 inches
- Height: 11 inches
- Booklet Cover Source: Tray 3



21 Close the Booklet Maker window.
22 Load 11 x 18.2-inch paper in Tray 3 and 8-1/2 x 11 paper in any tray.
23 Print the document.

■Using Adobe Acrobat to create a booklet with As Spread cover from Windows

Using Adobe Acrobat to create a booklet with As Spread cover from Windows
This section provides an example of a workflow printing a book from Adobe Acrobat. The sample book is 8-1/2 x 11 inches with 1-inch thickness. The body pages are 8-1/2 x 11. the cover image is 11 x 18, and the cover paper is 11 x 18.2 inch paper. The width of the trim is 0.2 inch.



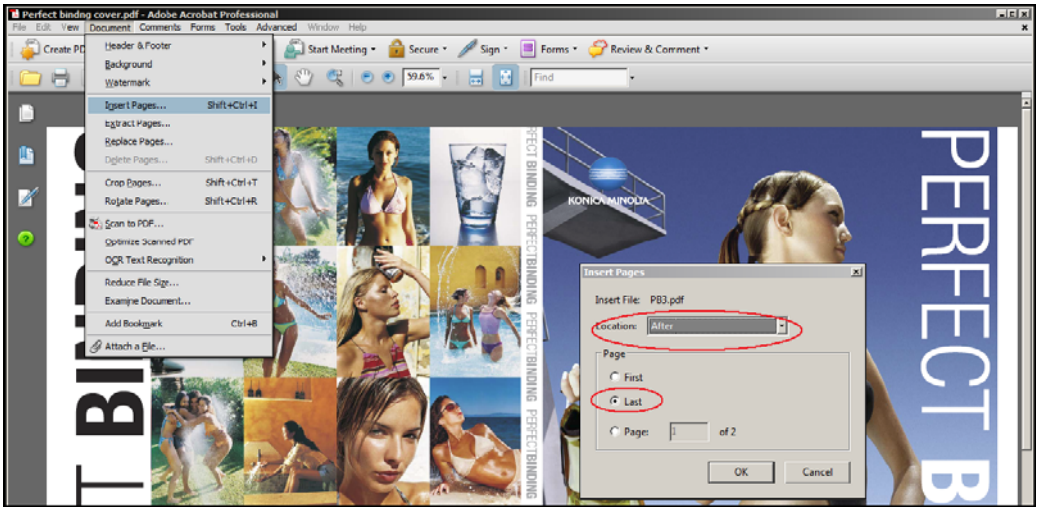
[Before you begin]
You must first create two PDF documents with the following specifications:

- A two-page, 11 x 18-inch PDF document for the cover
- An 8-1/2 x 11-inch PDF document with 20 to 600 body pages (10 to 300 sheets)

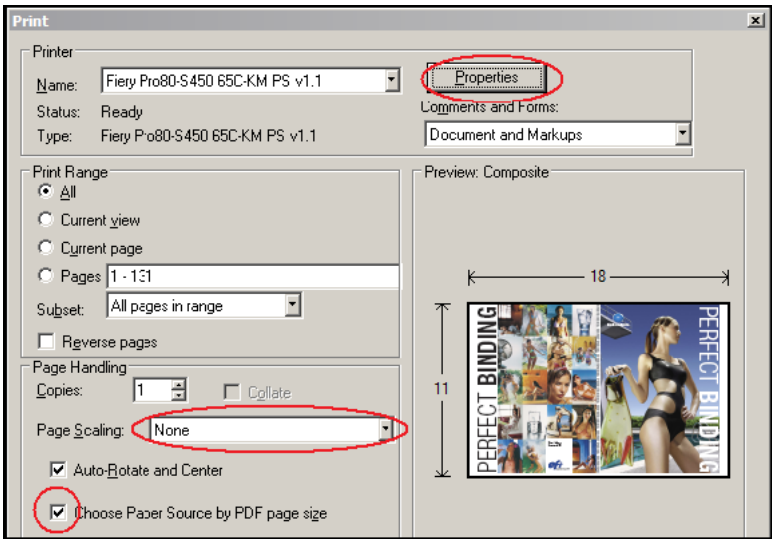
NOTE: You can use any software to create the original document, but the file must be converted to PDF format.

TO CREATE THE SAMPLE BOOKLET IN ADOBE ACROBAT

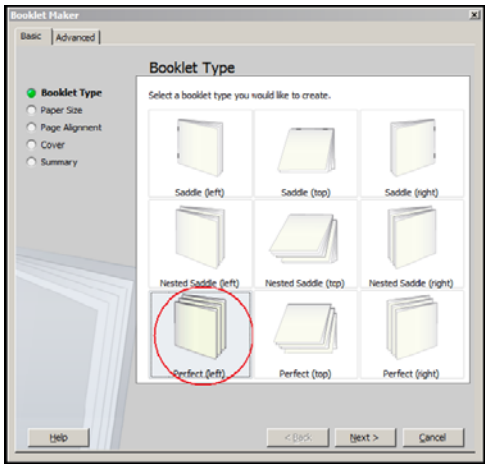
1 Open the 11 x 18-inch document in Adobe Acrobat.
2 Choose Insert Pages from the Document menu.
3 Select the 8-1/2 x 11-inch document to insert, specify After as the location, and then choose Last from the Page menu.
4 Click OK, and save the new document that you created.

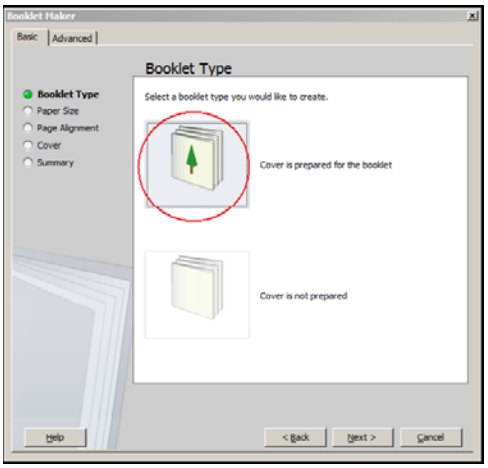


5 Choose Print, choose None for Page Scaling, and select Choose Paper Source by PDF page size.

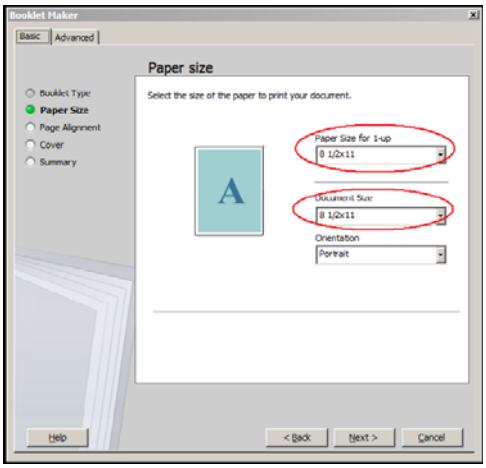


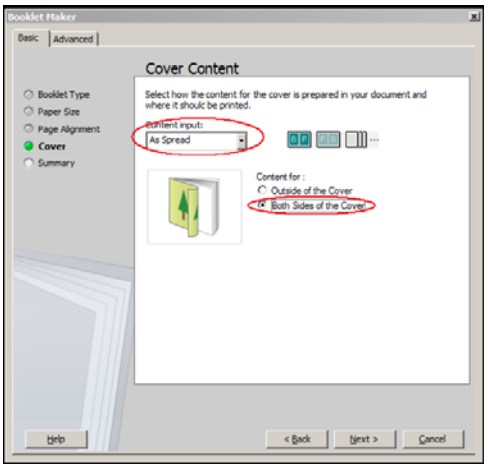
6. Click Properties and open Fiery Printing (or Printing Preferences).
7. In the Fiery Printing window, click the Layout tab, select Booklet, and click Settings.
8. In the Booklet Maker window, make the following selections:
   - Booklet Type: Perfect (left), Perfect (right), or Perfect (top)
   - Cover Is Prepared for Booklet



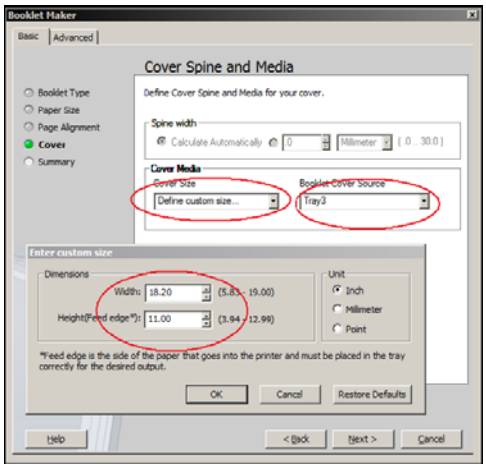


- Paper Size and Document Size: 8-1/2 x 11
- Orientation: Portrait
- Always choose Portrait when printing from Adobe Acrobat or Adobe Reader.
- Page Alignment: Enter any value
- Content Input: As Spread
- Content: Both Sides of the Cover





- Cover Size: Define Custom Size
- Width: 18.2 inches
- Height: 11 inches
- Booklet Cover Source: Tray 3



9 Close the Booklet Maker window and exit the printer driver.
10 Load 11 x 18.2-inch paper in Tray 3 and 8-1/2 x 11 paper in any tray.
11 Print the document.

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34 Calibration procedure

[Purpose]
Color matching between main body and controller

[Solution]
For color matching between main body and controller, calibration must be performed periodically. For the customer who is sever to color, it is recommended to perform calibration every morning at the starting up of the machine or just before starting every printing job. Following explains how to perform calibration for each controller.

Before performing controller calibration, perform following adjustment of the main body.
1) [Auto gamma adjustment]
- Service mode => [02 Process Adjustment] => [02 Drum Peculiarity Adj.] => [03 Auto gamma adjustment]
- [Adjustment] => [03 Execute Adjust Operation] => [Automatic Gamma Adj.]

The adjustment operation is the same between the above 2 procedure.

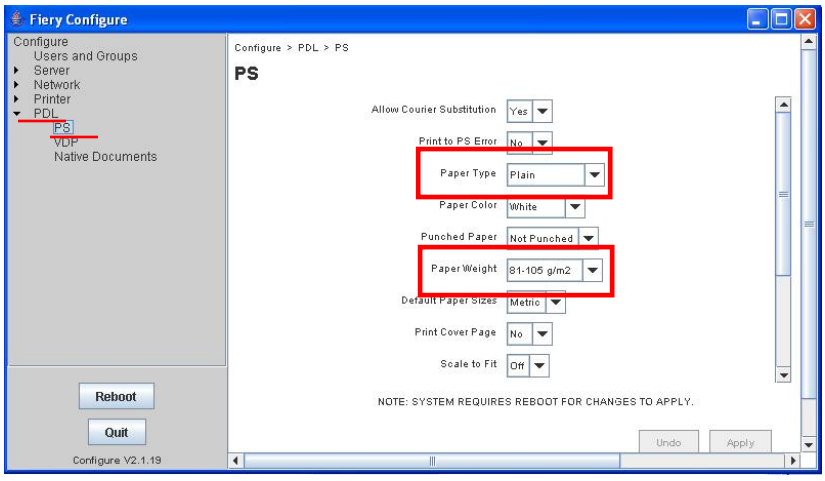
2) [Color registration adjustment]
- Service mode => [01 Machine Adjustment] => [01 Printer Adjustment] => [10. Color Registration Adjustment]
- [Adjustment] => [03 Execute Adjust Operation] => [Color Registration Adj.]

The accuracy is higher with the service mode.

3) [Gamma offset Adjustment]
- Service mode => [01 Machine Adjustment] => [03 Quality Adjustment] => [01 Printer Gamma Offset Adj.]
- Utility/Counter => [03 Machine Admin. Setting] => [01System Setting] => [05 Expert Adjustment] => [05 Expert Adjustment] => => [07 Quality Adjustment] => [01 Printer Gamma Offset Adj.]

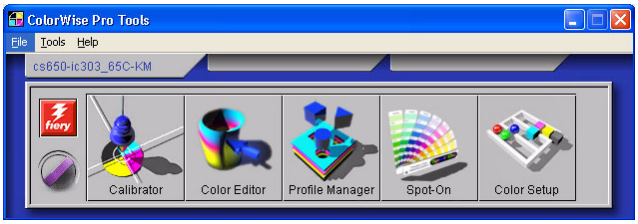
[EFI controller]

1. Startup Command Workstation. To perform calibration accurately, check paper setting from [Server]-[Settings]. For [PDL]-[PS], chose the proper setting for Paper Type and Paper weight matching the paper you want to use for the calibration. (If following two items are not set properly, paper and process control value may not match properly. Please mind these points.)

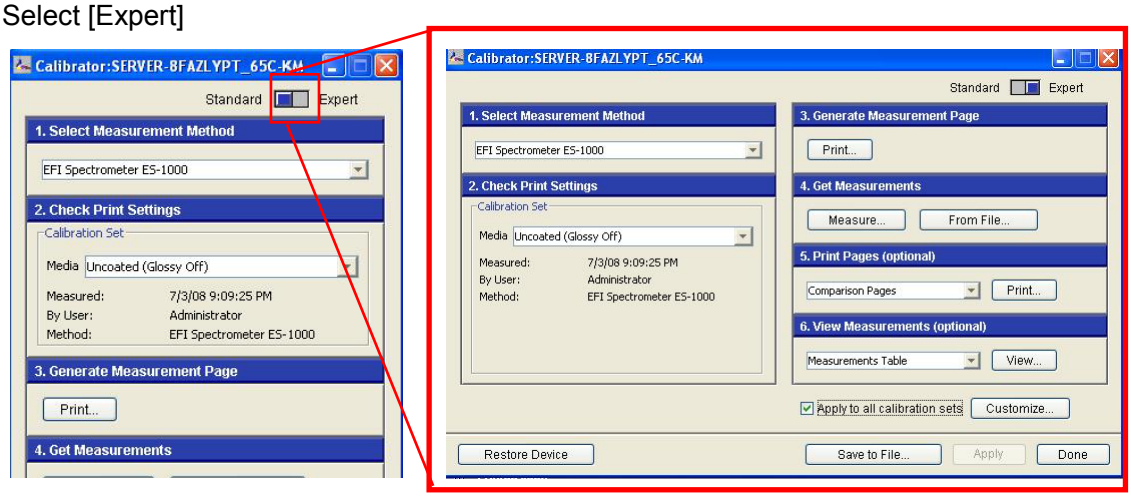


2. On Command Workstation, select [Server]-[Manage Color] and start up Color Wise Pro Tools.

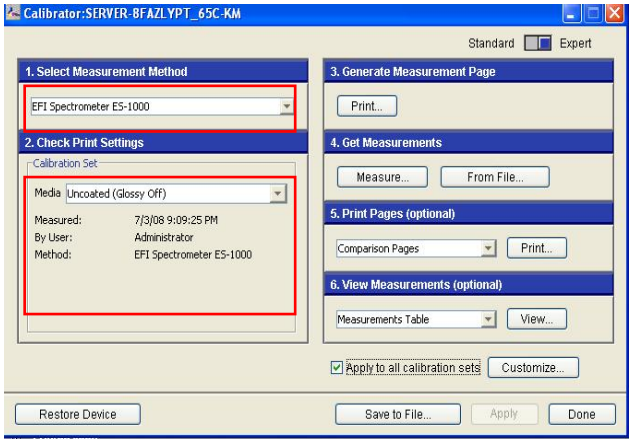
3. Click [Calibrator]



4. Select [Expert]

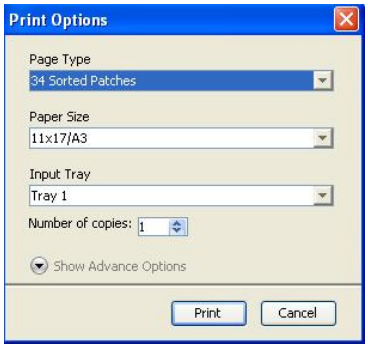


5. At [1.Select the Measurement Method], select the method which customer uses.

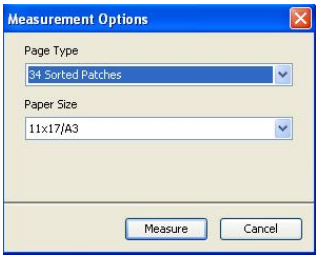


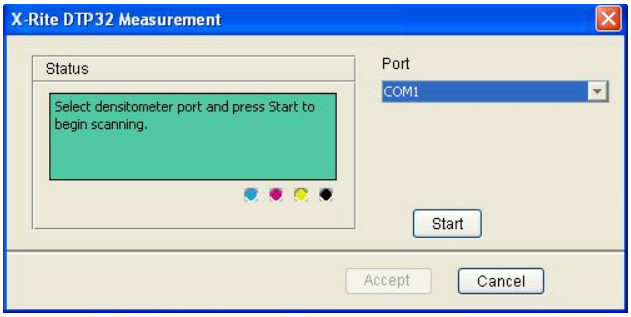
6. On [3. Generate Measurement Page], click [Print].

7. From Page Type, Paper size, select [34 Sorted Patches] (recommended), [11x17/A3] (recommended) then depending on the customer condition, specify the input tray and screen (at least perform with Dot1 as it is the default print screen)



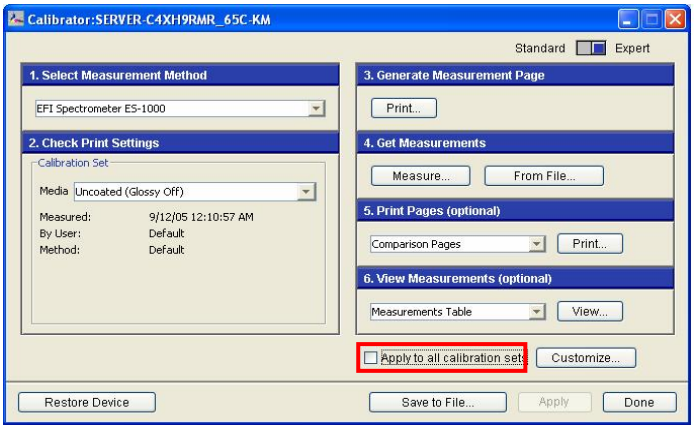
8. On [4. Get Measurements], click [Measure] button. Chose the same item you choose at step 7. Start measurement.



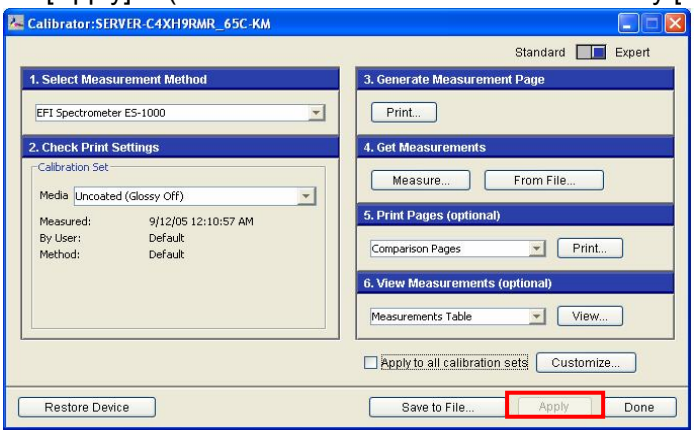


9. After measurement, be sure that [Apply to All Calibration Sets] is not checked.
If it is checked, the calibration result is reflected to all page types. Therefore, the check must be removed. Perform calibration for each page type. (For each page type, perform steps 4 through 8).

* It is recommended to perform calibration at least for non-coated paper (gloss mode off) and coated paper (gloss mode off)

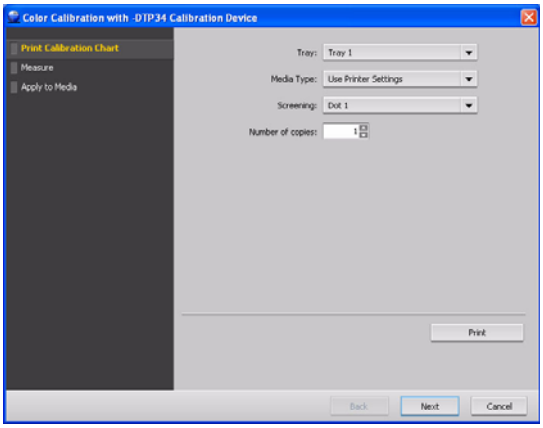


10. Click [Apply]. (Measurement result can be checked by [6. View Measurements])



[Creo controller]

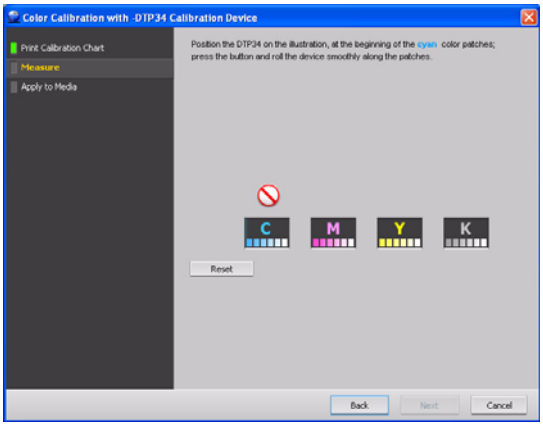
1. Select calibration from tool. Then Color Calibration starts up.



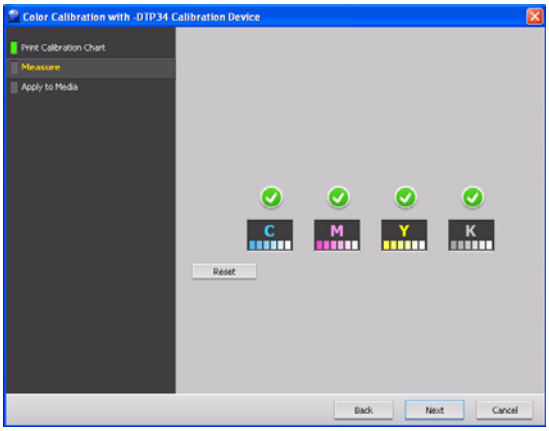
2. For [Tray], [Media Type] and [Screening], select the item customer frequently uses.

3. Select [Print]. Then Auto gamma adjustment of the engine is automatically started and then calibration sheet is output.

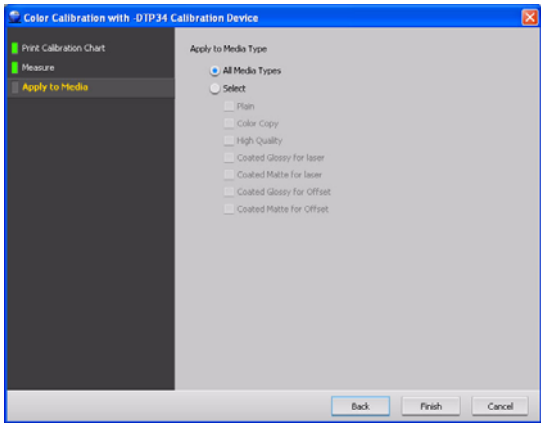
4. Referring the screen instruction, perform calibration.



5. When calibration ends successfully, click [Next].



6. Select the paper type (media type) you actually performed the calibration. (This step is important), then click [Finish].



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35 C6501 uneven density correction procedure

[Symptom]
When taking halftone sample, the density at the both sides to the main-scan direction is too light than the center. Or, the linear density shift appears to the main-scan direction.

[Probable cause]
Uneven density to main scan direction appears due to the environment change and dispersion of Write Unit.

[Solution]
Form C6501/C6501P/C5501, as the countermeasure against the uneven density to main-scan direction, [Density adjustment setting] is newly added. Perform following adjustment at the machine installation/PM

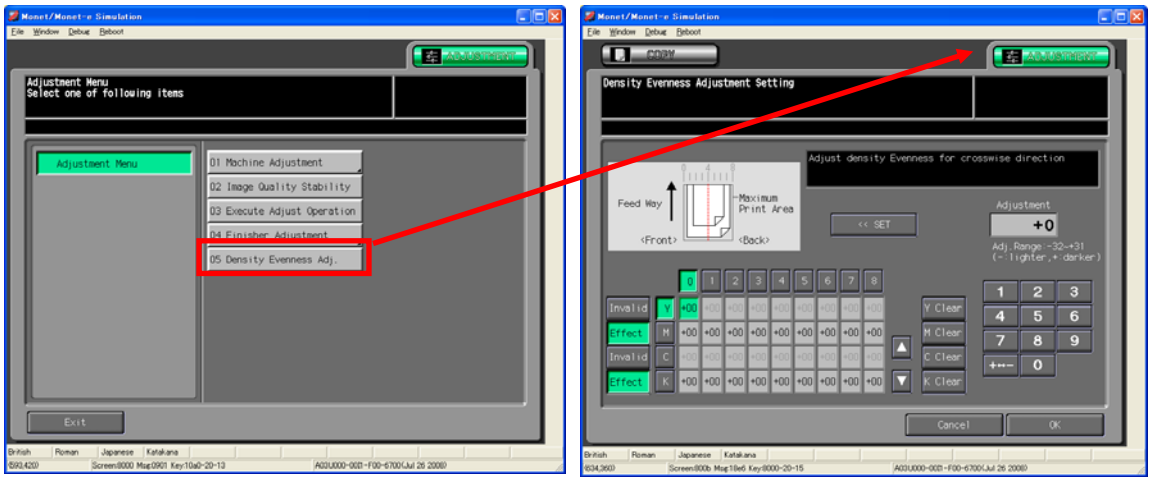
Before performing [Density Evenness Adj.], perform following adjustments.

#1. [Auto gamma adjustment],
- Service mode => [02 Process Adjustment] => [02 Drum Peculiarity Adj.] => [03 Auto gamma adjustment]
- [Adjustment] => [03 Execute Adjust Operation] => [Automatic Gamma Adj.]
  * Machine operation is the same for both adjustment operations.

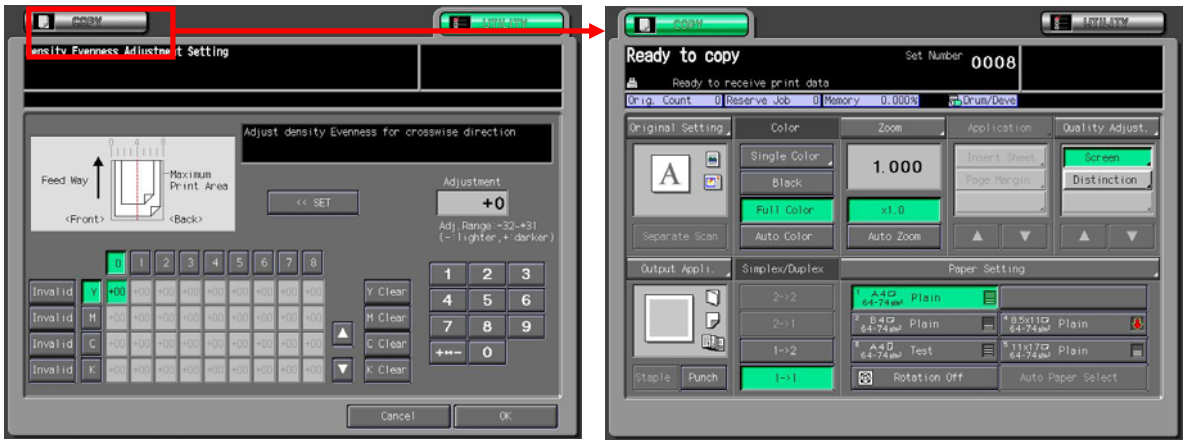
#2. [Color registration adjustment]
- Service mode => [01 Machine Adjustment] => [01 Printer Adjustment] => [10. Color registration Adj.]
- [Adjustment] => [03 Execute Adjust Operation] => [Color Registration Adj.]
  * Accuracy of Adjustment is higher in service mode.

#3. [Printer gamma offset adjustment]
- Service mode => [01 Machine Adjustment] => [03 Quality Adjustment] => [02 Printer gamma adjustment] => [01 Printer Gamma Offset Adj.]
- [Utility/Counter] => [03 Machine Admin. Setting] => [01 System Setting] => [05 Expert Adjustment] => [07 Quality Adjustment] => [01 Printer Gamma Offset Adj.]
  Then, perform Density Evenness Adjustment with the following procedure.

#4. [Density Evenness Adjustment]
- [Utility/Counter] => [User Setting] => [07 Image Quality Setting] => [05Density Evenness Adj.]
- [Adjustment] => [05 Density Evenness Adj.]

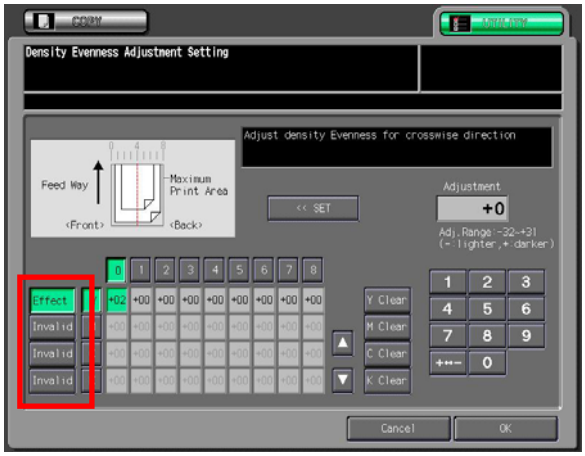


1. First, press COPY button and confirm that the set number is specified as 8. Select the paper type and tray you want to use. Then print the pattern for the adjustment.
   Set the [Paper Type] and [Weight] of the Paper Setting correctly.



2. The line on the printed adjustment pattern and the indication on the operation screen correspond. Therefore, check the location for the adjustment then change the value of the responding location. To change darker, enter the larger value. To change lighter, enter the lower value for each color. (First, change 10-step for the rough adjustment, then fine tune in details.)

3. After entering the adjustment value, press [Invalid] to turn it to [Effect], to reflect the set value for the adjustment. (Unless “Effect” is selected, the adjustment value is not reflected)



4. Repeat steps 1 through 3 until the desired image is printed.

The adjustment value of [05 Density Evenness Adjustment Setting] is effective for all level halftone except D-max. Therefore, this adjustment should be performed carefully.
It is recommended to use the actual sample for the adjustment.
This adjustment can be performed by the customer.

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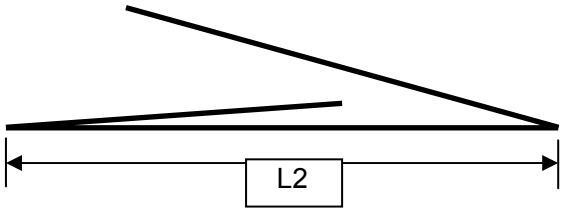
36 SD-506, tri-fold adjustment procedure

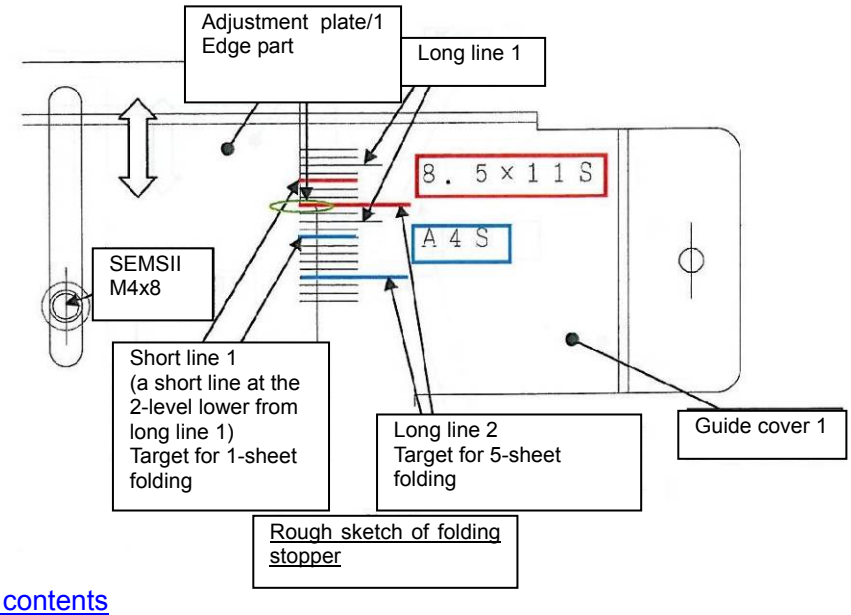
[Symptom]
With SD506 tri-fold, the L2 in Fig 1 variation accuracy is larger than specifications.
The variation in the specification is +/-4mm for A4/8.5*11 inch.
After performing this adjustment, the variation can be reduced to approx. +/- 2mm.

Fig 1
Side view of tri-folded paper



[Solution]
1. Firmware Setting value before performing adjustment
Service mode =>[07. Finisher Adjustment] => [06 Saddle Stitcher Adj.] => [05. Tri-Fold Position Adj.] : Change the value for [Double Fold] to +50.

2. Mechanical adjustment (Refer to the following figure)
Step 1: Loosen SEMS (4x8mm).
Step 2: According to the paper size, number of sheet to be folded, align the adjustment plate/1 edge with the pressed mark.
Step 3: Ensure so that the adjustment plates/1 at right and left is aligned with the pressed mark at the same scale. Tighten the screw.



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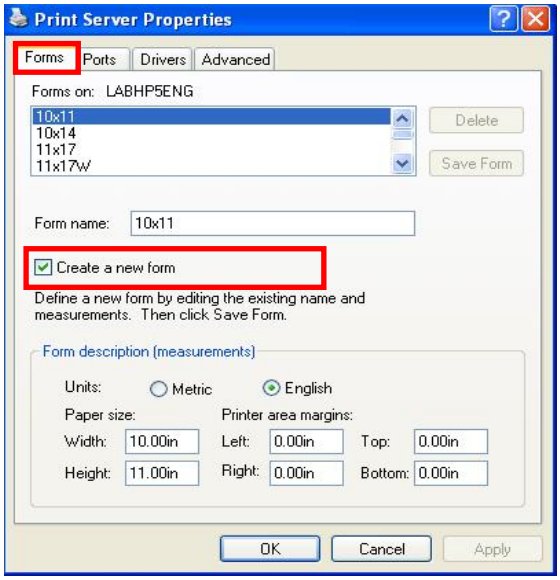
37 How to print on custom size (IC303/IC305/IC408) : MS Word

How to print custom size from [Fiery IC303/305/408] using MS Word

1. From Windows control panel, open [Printers and Faxes].
2. Select [File] – [Server Properties]

3. Select [Forms] tab.
4. Using [Create a new form], register arbitrary custom size.



5. Word Page Setup
Page orientation : Portrait
Papre size : Width < Height

6. Fiery driver setting
Document Size: PS custom page size Width < Height
Paper Size : To print LEF: Width > Height
To print SEF: Width < Height

The points are:
・Need to register custom size on the OS Printer folder, server properties.
・On Fiery driver Paper size, Width > Height for LEF
Width < Height for SEF
LEF: Long Edge Feed, SEF: Short Edge Feed

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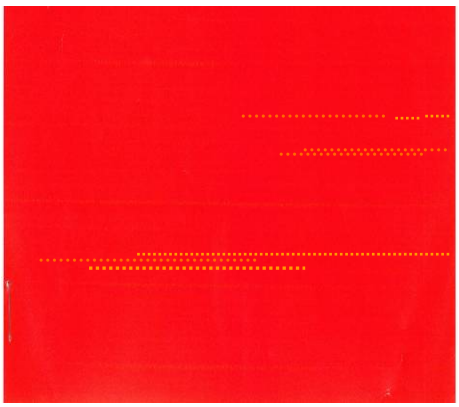
38 Rippled uneven image

[Symptom]
At the secondary colors (red and blue) overlapping solid parts, unevenness appears to the main-scan direction.



[Probable cause]
At the overlapping colors (red and blue) if the toner charging amount increases due to the previous job or ambient factors, the electric charge flows in to the toner at the first transfer. Consequently, the charge increases in toner layer then peeling discharge occurs after passing the 1st transfer nipping.

[Solution]
By changing the 1st transfer current, reduce the charge in the toner layer to reduce peeling discharge.

[Utility/Counter] => [03 Machine Admin. Setting] => [01System Setting] => [05 Expert Adjustment]
=> [06 Process Adjustment] => [01 Front & Back Density]

The basic solution is, adjust the 1st transfer current for yellow to black by step by step (decrement by 1 step) and find the condition not to causing the discharge.
However, the 1st transfer to be adjusted depends on the width of the rippled mark to the main-scan direction. Therefore, if the symptom cannot be resolved by increasing the transfer current, also adjust to reduce the value.

CAUTION: If the first transfer current is decreased too much, the white spot may appear. Please mind it and check the image carefully when performing the adjustment.

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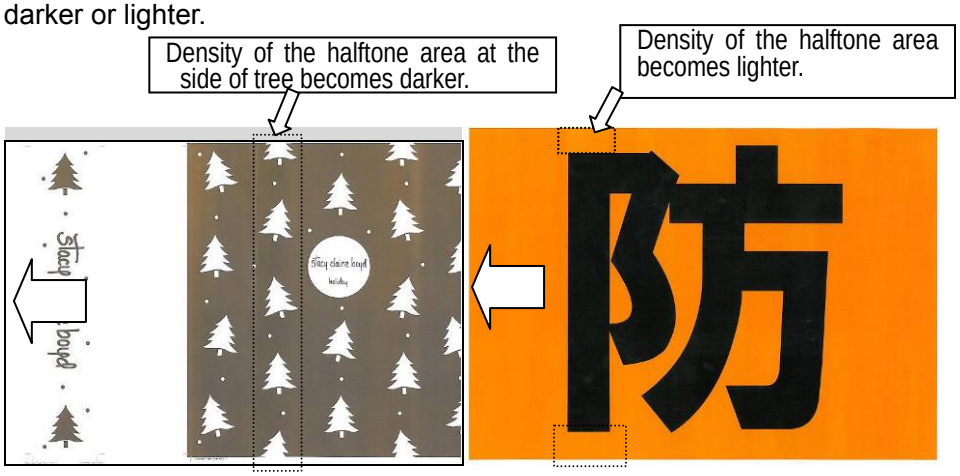
39 Banding on Halftone

[Symptom]
When solid part or blank part appears in the halftone area, the density of halftone becomes darker or lighter.



[Probable cause]
a) If blank area exists in the halftone area, the transfer current concentrates to the halftone where toner is attached. Consequently, the transfer ratio increase at the halftone then density increases.
b) If solid area exists in the halftone area, the transfer current concentrate to the solid part where the more toner is attached. Consequently, the transfer ratio decreases at the halftone area and density decreases.

[Solution]
By reducing the 1st transfer current, the current concentration degree can be reduced and the difference of the density is improved.

[Utility Counter] =>[03 Machine Admin. Setting] => [01System Setting] => [05 Expert Adjustment] => [06 Process Adjustment] => [01 Front & Back Density]

Reduce the 1st transfer current from yellow to black by step by step (decrement by 1 step) and find the best condition.
The banding cannot be eliminated completely but can be improved.

CAUTION: If the 1st transfer current is decreased too much by [01 Front & Back Density] adjustment, the white spot may appear. Please mind it and check the image carefully when performing the adjustment.

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40 Adjustment Procedure at Write Unit Replacement

[Symptom]
After replacing Write Unit, if [09 Writing Init. Pos. Memory] is not performed, following SC may occur at the color registration adjustment.

- C-4520（color registration correction error）
- C-4501, C-4502, C-4503, C-4504 (laser correction motor abnormality)

[Cause]
[09 Writing Init. Pos Memory] is not performed, the adjustment value is not reset to the initial value.　Consequently, adjustment margin is decreased in some cases.

[Solution]
At the writing unit replacement, perform adjustment as follows.
Be sure to follow the order of steps.

1. Clean dust-proof glass
2. Perform following adjustments in order
   a. Writing Init Pos. Memory

   b. LD Bias Adjustment
   c. I/O check mode
   d. CD Skew Adjustment *1
   e. Restart Timing Adjustment *1
   f. Color Registration Adjustment
   g. Color Registration/Manual (Adjustment)
   h. Auto Gamma Adjustment

NOTES:
1. The steps [d] and [e] are not necessary for Write unit (C)
2. After performing the above course of adjustments, if you notice that [Writing Init. Pos. Memory] is skipped, perform [Writing Init Pos. Memory] adjustment then [Color Registration Adjustment] without fail.

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41 Blurred Characters, toner spray only on black part in color at rear edge, with thick paper

[Symptom]
Under following conditions, black text gets blurred or oversaturated at the machine rear side.
- Thick paper 1/2 speed (210-300gsm)
- Full color mode (At the 1st transfer, all colors are pressed)

Symptom occurrence position is 1st transfer unit.

[Cause]
Toner attachment amount is too much.

[Solution]
Since the symptom becomes noticeable by the slight change of density, BT proposes the following step by step method to optimize toner attachment amount.
After performing each step, check whether the symptom appears or not.

1. Access the Covered Margin Fine Adjustment and if the adjustment value is minus value, check whether the symptom occurs with the default value.
   If the minus value was entered, reset to the default value (+/-0).
   [Service Mode]=> [02 Process Adjustment] => [02 Process Fine Adjustment] => [01 Covered Margin Fine Adjustment]
   NOTES:
   *1: The adjustment value is reflected after performing Automatic Gamma adjustment.
   *2: If adjustment value is increased too much, carrier attachment or void occurs. Therefore, check the image using test pattern
   *3: If the + value is already entered at step 1, go to step 2 then step 4.

2. If the step 1 is not enough,
   Decrease Bk maximum toner quantity adjustment value (Start check from [-2])
   [03 Machine Admin. Setting] => [01 System setting] => [05 Expert Adjustment] => [06 Process Adjustment] =>[03 Toner Quantity/Exposure]=> [Maximum Toner Quantity]

   NOTE:
   * Since the maximum Bk density decreases, check the image density using test pattern.

3. If the step 2 is not enough,
   Access Covered Margin Fine adjustment and increase Bk adjustment value.
   Start check from [+3]
   [Service Mode]=> [02 Process Adjustment] => [02 Process Fine Adjustment] => [01 Covered Margin Fine Adjustment]

4. If no improvement is observed after step 1 and 2,
   check the following points of 1st transfer section of intermediate transfer unit:
   - Whether shaft holder is damaged.
   - Whether pressure spring is moved from normal position
5. If no abnormal is found at the step 4, replace intermediate transfer unit.

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42 How to install IC-304 enhanced driver for Mac

This is the supplemental information of the IC-304 User Guide for the correct installation of the enhanced IC-304 Print driver for Macintosh client.
The explanation is different between [MacOS9.22 and later /MacOS X 10.2 and later] and [MacOS X 10.4.X/10.5.X].
For [MacOS9.22 and later /MacOS X 10.2 and later] the printing with PPD is explained and for the [MacOS X 10.4.X/10.5.X], printing with enhanced driver are explained.
Following explanation also contains the respect pages of the IC-304 User Guide.

[MacOS9.22 and later/MacOS X 10.3 and later] Printing with PPD.

(For details, see User Guide page 26 to 29)

1. From a Mac client, connect with the IC-304 on the network.
2. Access Utilities¥PPD¥English¥MAC (for OS9), MacOSX (for OSX), and select IC-304V2.PPD.
3. Copy IC-304V2.PPD to the following folder.
   MacintoshHD¥Library¥Printers¥PPDs¥Contents¥Resources¥en.lproj
4. In the “System Preferences” double-clilick “Print & Fax” and add printer with + button. From the, “Print Using”, select the “Other”. Then browse to the folder in which you copied the PPD file at the Step 3. Then Select the IC-304V2. PPD.
5. Open the file to be printed from the application. Then, select “Print” from the “File” menu.
6. On print dialogue, select the IC-304 virtual printer. Then from the pull-down menu of the “Copies & Pages” list, select “Printer Features”
7. From “Feature Sets”, select the necessary setting items then click “Print”.
8. The file is sent to the IC-304.

[MacOS X 10.4/10.5] Printing with the Enhanced driver

（For details, refer to the User Guide P.32 to P.40）

* PPD file (IC-304V2.PPD） is automatically after following the driver installation procedure in below.
  No need to copy PPD file manually.

1. From client Mac, connect with the IC-304 on the network.
2. From Utilities¥MAC Utilities, double-click on IC-304V2_ColorServerPrintDriverInstaller.dmg.
3. Follow the guide of the Creo Color Server Print Driver installation wizard, complete the installation.
4. In the “System Preferences” click the “Print&Fax”. Add printer using + button. From the printer list, select the IC-304 virtual printer (If both Bonjour and AppleTalk are selectable, Bonjour is recommended.)
5. From “Print Using” list, select “Other”.
   From following folder:
   MacintoshHD¥Library¥Printers¥PPDs¥Contents¥Resources¥en.lproj¥A4
   Select “IC-304V2.PPD” then click “Add”.
6. Check the IC-304 Virtual Printer you have set is listed on the “Print & Fax” Window. Double-click the printer.
7. Double-click the “Utility” icon. Check if the “Enable enhanced User Interface” is set to “ON”. For the “Server Host Name”, enter server name or IP address then click the “Apply”.
   * After clicking the “Apply”, the setting is stored thought the window does not close. Therefore, click the X mark on the window to close. Then double-click the “Utility” icon and check if the server name or IP address is stored.
8. Open the file to be printed from the application. Then, select “Print” from the “File” menu.
9. Select IC-304 virtual printer from the print dialogue. Select “Printer Features”.

10. Click “Feature Sets” and open IC-304 enhanced driver job setting screen. Select the necessary items and click “OK”.
11. Click the “Print” in the printer dialogue.
12. The file is sent to IC-304.

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43 IC-304: Custom size is recognized as A4

[Symptom]
On IC-304, though custom size is set for the paper size, the image is printed on A4 size.

[Solution]
Perform following steps specified for each application.

[Adobe Acrobat 8]
1. On Adobe Acrobat, select print.
2. On print dialogue, select the IC304 virtual printer for the printer “Name”.
   At the Page Handling, select the “None” for “Page Scaling”. Check the “Auto Rotate and Center”.
   Check the “Choose Paper Source by Paper Size“ then click “Property”.
3. On IC304 job setting screen, on the Print tab – Paper setting, select the paper size to “Custom S”. At the lower “W “ (width) and “H” (height) column, enter the size of the paper to use. Check other settings.
4. On IC304 job setting screen, enter “OK” on Job setting screen and print dialogue box of the application setting screen.
   * To add crop mark, there are two ways: one is to use imposition (step & repeat) function of IC-304 and the other is to use Adobe Acrobat function with the following setting; Advanced => Marks and Bleeds => Trim Marks.

[Adobe Illustrator CS3]
1. On Illustrator CS3, select print.
2. On print dialogue, select IC-304 virtual printer for the printer “Name”,.
3. From the General tab, change the paper size to custom then enter the size for “Width” and “Height”. Check “Do not scale” in the option.

4. On the setup tab, trimming, select the “Artwork bounding box”.
5. Click the printer. On the print dialogue, check that the IC304 virtual printer is selected. Then click the Details.
6. On IC304 job setting screen, print tab – paper setting, select “Custom S” for paper size then, enter the size of the paper to be used in “W” (width) and “H” (Height) column. Check other settings.
7. On IC304 job setting screen, enter OK. On the application print dialogue, enter OK. On print dialogue, click the “Print”. On the application print dialogue, click the “Print”.

[Adobe InDesign CS3]
1. On InDesign CS3, select print.
2. On print dialogue, select IC304 virtual printer for the printer “Name”.
3. On Setup tab, paper size, select “Custom”. Enter “Width” and “Height”. With the option scale, specify 100% for both width and height. For the page position, select “Page position Centered.”
4. Click printer. On print dialogue, check that the IC-304 virtual printer is selected. Then click Details.
5. On IC304 job setting screen, print tab – paper setting, select “Custom S” for paper size then, enter the size of the paper to be used in “W” (width) and “H” (Height) column. Check other settings.
6. On IC304 job setting screen, enter OK. On the application print dialogue, enter OK. On print dialogue, click the “Print”. On the application print dialogue, click the “Print”.

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44 FS-607/520 Main Tray Capacity by Paper Size and Paper weight

In accordance with the Finishers FS-607/520 firmware update (DLBT0802508EN*), the problem of the main tray stacking capacity was corrected. Following table indicates the upper limit with the latest firmware.

[Supported version]
FS-607: G00-33 and later
FS-520: G00-31 and later

[CAUTION]
1) The limitation mentioned in the table is the rough indication. So, the machine does not stop immediately when the count reaches to the upper limit. Depending on the output status, more than upper limit may be stacked on the tray. The maximum difference between the limitation and actual output is around 100 sheets.
2) Be careful that if paper empty and/or jam occurs during printing, the stacking count is reset. Therefore, the papers are stacked more than limitation.

Custom size

	Paperweight (g/m2)							
Paper size	64-74	75-80	81-105	106-135	136-162	163-209	210-256	257-300
A4	3000	3000	3000	3000	3000	3000	3000	3000
A4 S	3000	3000	3000	3000	3000	3000	3000	3000
B5	3000	3000	3000	3000	3000	3000	3000	3000
B5S	3000	3000	3000	3000	3000	3000	3000	3000
8.5x11	3000	3000	3000	3000	3000	3000	3000	3000
8.5x11 S	3000	3000	3000	3000	3000	3000	3000	3000
16K	3000	3000	3000	3000	3000	3000	3000	3000
16K S	3000	3000	3000	3000	3000	3000	3000	3000
Executive(7.25x10.5)	3000	3000	3000	3000	3000	3000	3000	3000
Executive S(7.25x10.5)	3000	3000	3000	3000	3000	3000	3000	3000
SRA3	1500	1500	1000	1000	700	700	500	500
SRA4	1500	1500	1000	1000	700	700	500	500
SRA4 S	1500	1500	1000	1000	700	700	500	500
A3	1500	1500	1000	1000	700	700	500	500
B4	1500	1500	1000	1000	700	700	500	500
13x19	1500	1500	1000	1000	700	700	500	500
12x18	1500	1500	1000	1000	700	700	500	500
11x17	1500	1500	1000	1000	700	700	500	500
8.5x14	1500	1500	1000	1000	700	700	500	500
F4 (8.125x13.25)	1500	1500	1000	1000	700	700	500	500
F4 (8.25x13)	1500	1500	1000	1000	700	700	500	500
F4 (8x13)	1500	1500	1000	1000	700	700	500	500
F4 (8.5x13)	1500	1500	1000	1000	700	700	500	500
8K	1500	1500	1000	1000	700	700	500	500
A5	500	500	500	500	500	500	500	500
A5 S	500	500	500	500	500	500	500	500
B6 S	500	500	500	500	500	500	500	500

5.5x8.5	500	500	500	500	500	500	500	500
5.5x8.5 S	500	500	500	500	500	500	500	500

Custom size

Length to the feed direction (mm)	Paper weight (g/m2)							
	64-74	75-80	81-105	106-135	136-162	163-209	210-256	257-300
148 to 297	3000	3000	3000	3000	3000	3000	3000	3000
298 to 458	1500	1500	1000	1000	700	700	500	500

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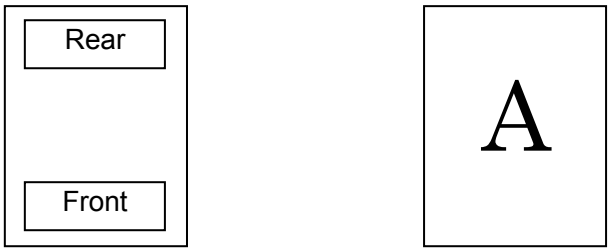
45 Copy image orientation changes if using finishing function

[Symptom]
When making a copy, if finishing function is selected, the image orientation changes.
* When using as the printer, the image orientation is constant regardless of the finishing setting.

[Solution]
Following indicates the image orientation direction. Please change paper setting direction as needed.

Paper set direction (Rear: Machine rear, Front: Machine front)



<Copy (no finishing)>

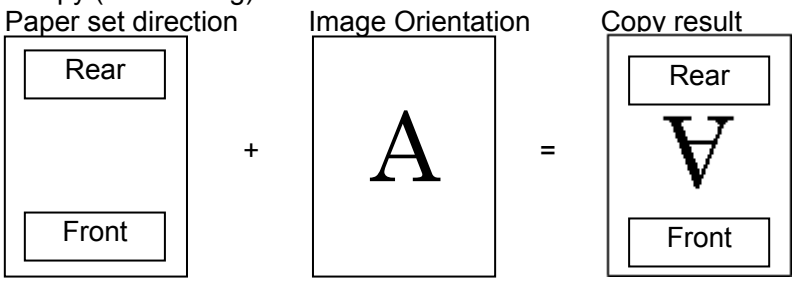


Image orientation is machine rear side basis. So, the image is rotated 180 degrees from the paper setting direction.

<Top-left corner staple >

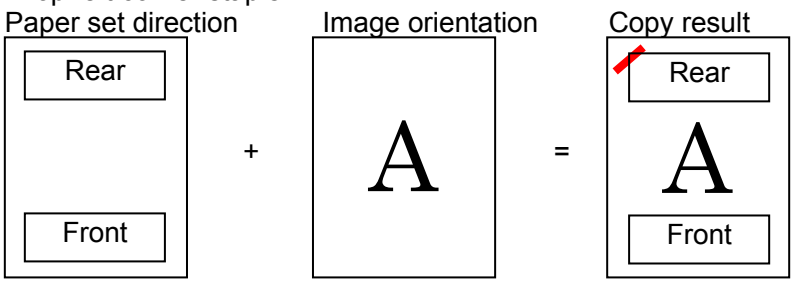


Image orientation is machine front side basis. So it is the same as paper setting direction.

<Left side punch >

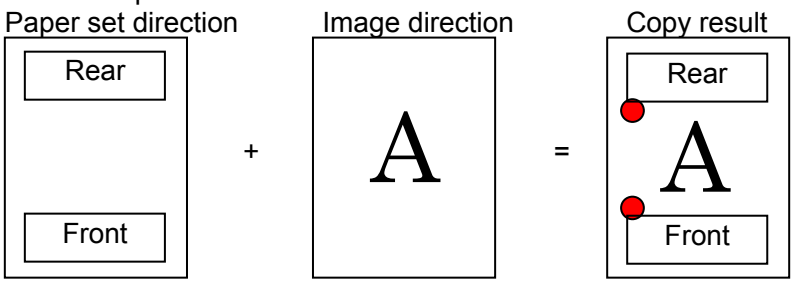


Image orientation is machine front side basis. So it is the same as paper setting direction.

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46 Paper size list (to feed and to exit)

Following table indicates the size of paper which can bee fed or exited.

Paper feed size and weight

Name	Function	Minimum	Maximum		Paper weight
C6500/C6500P/C6501/ C6501P/C5500/C5501 Main body	Tray 1,2,3	140x182mm	330x487mm	Plain/ High Quality/ Color Specific paper	64 to 256gsm *1
					64 to 209gsm *2
				Coated_GL, ML, GO, MO paper	81 to 256gsm *1
					81 to 209gsm *2
	Bypass feed	100x148mm	330x487mm	Plain/ High Quality/ Color Specific paper	64 to 300gsm
				Coated_GL, ML, GO, MO paper	64 to 300gsm *3
LU-202 Large capacity paper feed tray	Tray 4	210x182mm	330x487mm		64 to 256gsm
PF-601/602 Large capacity paper feed tray	Tray 4	100x182mm	330x487mm		64 to 256gsm
	Tray 5	100x148mm	330x487mm		64 to 300gsm
PI-502 Post inserter	Tray /UP	182x139mm	216x297mm		64 to 200gsm
	Tray /Lw	182x139mm	314x458mm		64 to 200gsm
DF-609 Auto double sided original feeder	Single side	128x139.7mm	297x431.8mm		64 to 209gsm
	Double side	128x139.7mm	297x431.8mm		64 to 209gsm

Paper exit size and weight

Name	Function	Minimum	Maximum		Paper weight
FS-503 Flat stiching staple finisher	Main tray	128x148mm	330x483mm	paper length 279mm or larger	64 to 300gsm
				paper length less than 279mm	64 to 300gsm
	Sub tray	100x148mm	330x487mm		64 to 300gsm
	Staple	210x148mm	324x460mm		64 to 256gsm
FS-521 Flat stiching staple finisher	Main tray				
	Straight mode	128x148mm	330x483mm		64 to 300gsm
	Shift mode	148x148mm	324x463mm		64 to 300gsm
	Sub tray	100x148mm	330x487mm		64 to 300gsm
	Staple	203x148mm	324x463mm		64 to 256gsm
FD-501 Punch and folding unit	Main tray	128x148mm	330x483mm		64 to 256gsm
	Sub tray	100x148mm	330x487mm		64 to 300gsm
		182x148mm	324x460mm		64 to 209gsm
	Punching function	Stylized paper with paper width from 148mm to 305mm only		at 2 punched holes	64 to 209gsm
		Stylized paper with paper width from 257mm to 305mm only		at 3 or 4 punched holes	64 to 209gsm
	Folding functions				
	Folding, Letter fold-in, Letter fold-out, Z-fold	210x279mm	305x458mm		64 to 135gsm
	Double parallel fold, Gate fold	210x279mm	305x458mm		64 to 105gsm
	Post insert function	182x148mm	330x483mm		64 to 300gsm
FD-503 Punch and folding unit	Main tray	100x148mm	330x483mm		64 to 300gsm
	Sub tray				
	with folding tray				
	Folding, Letter fold-in, Letter fold-out, Z-fold	210x279mm	305x458mm		64 to 135gsm
	Double parallel fold, Gate fold	210x279mm	305x458mm		64 to 105gsm
	without folding tray	100x148mm	330x487mm		64 to 300gsm
	Punching function	Stylized paper with paper width from 148mm to 305mm only		at 2 punched holes	64 to 209gsm
		Stylized paper with paper width from 257mm to 305mm only		at 3 or 4 punched holes	64 to 209gsm
	Folding functions				
	Folding, Letter fold-in, Letter fold-out, Z-fold	210x279mm	305x458mm		64 to 135gsm
	Double parallel fold, Gate fold	210x279mm	305x458mm		64 to 91gsm
	Post insert function	182x148mm	330x483mm		64 to 300g/m2
LS-501/502/505 Large capacity stacker	Stacker tray	210x148mm	330x483mm		64 to 244gsm
	Sub tray	100x148mm	330x487mm		64 to 300gsm
SD-501 Saddle stiching unit	Straight/subtray mode	100x148mm	330x487mm		64 to 300gsm
	Saddle stitching mode	182x257mm	324x460mm		64 to 244gsm
	Trimming mode	182x257mm	324x460mm		64 to 244gsm
	Folding mode	182x257mm	324x460mm		64 to 244gsm
	Tri-folding mode	A4R/8.5x11R			64 to 91gsm
SD-506 Saddle stiching unit	Straight/subtray mode	100x148mm	330x487mm		64 to 300gsm
	Saddle stitching mode	182x257mm	324x463mm		64 to 244gsm
	Trimming mode	182x257mm	324x463mm		64 to 244gsm
	Folding mode	182x257mm	324x463mm		64 to 244gsm
	Tri-folding mode	A4S,8.5x11S			64 to 91gsm
PB-501/502 Simplified perfect binding machine	Simplex perfect binding mode			If inside papers are over 46 pages, does not decrease simplex perfect bind productivity.	
	Inside paper	140x182mm	307x221mm		64 to 91gsm 64 to 105gsm (PB-502)
	Cover paper	140x365mm	307x472mm		75 to 161gsm
	Duplex perfect binding mode			If inside papers are over 24 pages, does not decrease duplex perfect bind productivity.	
	Inside paper	139x148mm (from Tray 5)	307x221mm		64 to 91gsm 64 to 105gsm (PB-502)
	Cover paper	139x297mm (from PB Tray)	330x472mm		75 to 161gsm
	Sub tray mode	100x148mm	330x487mm		64 to 300gsm
FS-607 Saddle stiching staple finisher	Main tray	182x148mm	314x458mm		64 to 300gsm
	Sub tray	100x148mm	330x487mm		64 to 300gsm
	Stapling mode	182x148mm	314x458mm		64 to 105gsm
	Saddle stitching mode	210x279mm	314x458mm		64 to 105gsm
	Folding mode	210x279mm	314x458mm		64 to 105gsm
	Tri-folding mode	A4S/8.5x11S/16KS			64 to 105gsm
FS-520 Staple finisher	Main tray				
	Straight mode	128x148mm	314x458mm		64 to 300gsm
	Offset mode	182x148mm	314x458mm		64 to 300gsm
	Sub tray	100x148mm	330x487mm		64 to 300gsm
	Stapling mode	182x148mm	314x458mm		64 to 209gsm
OT-502 Output tray		100x148mm	330x487mm		64 to 300gsm
RU-503/504 Conveyance cooling unit	Accelerated conveyance mode	100x148mm	330x487mm		64 to 300gsm
	Decurler conveyance mode	100x148mm	330x487mm		64 to 209gsm

*1 Paper length (feed direction) 215.9mm or larger **or** width (scan direction) 279.4mm or larger.
*2 Paper length (feed direction) less than 215.9mm **and** width (scan direction) less than 279.4mm.
*3 Available only one sheet at a time

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